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No. 16.

THE TRANSACTIONS

AND

JOURNAL OF PROCEEDINGS

OF THE

DUMFRIESSHIRE AND GALLOWAY

Natural History and Antiquarian Society

FOUNDED NOVEMBER, 1862.

SESSION 1899-1900.

PRINTED AT THE COURIER & HERALD OFFICES, DUMFRIES.

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CONTENTS.

	Page.
Secretary's Report	2
Treasurer's Report	2
Place Names of Cairn Valley—*Dr J. W. Martin*	4
Notes on an Old Tradition—*Rev. John Cairns*	14
Meteorology of Dumfries for 1899—*Rev. Wm. Andson* ...	21
Nesting of Nightjar in Glencairn—*John Corrie*	26
Origin of Ruthwell Cross—*James Barbour*	28
Roman Name for Birrens—*Dr Chinnock*	32
Vegetable Enemies of Mankind—*Professor Scott-Elliot* ...	33
Field Meetings	38
Excavations at Birrenswark—*James Barbour*	41

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PROCEEDINGS AND TRANSACTIONS

OF THE

DUMFRIESSHIRE AND GALLOWAY

NATURAL HISTORY & ANTIQUARIAN SOCIETY.

SESSION 1899-1900.

19th October, 1899.

ANNUAL MEETING.

Rev. Mr ANDSON in the Chair.

New Member.—Dr Alexander Trotter, Dalshangan, Dalry.

Donations and Exchanges.—"A Country Schoolmaster—James Shaw," presented by Professor Wallace; Transactions of the Edinburgh Geological Society, Vol. XII., Part IV.; Proceedings of the Natural Science Association of Staten Island; Life History Studies of Animals, by L. C. Miall; The Royal Menagerie of France, by E. T. Hamy; The Law which underlies Protective Coloration, by Abbot A. Thayer; on Soaring Flight, by E. C. Huffaker; North American Fauna, No. 14, from U.S. Department of Agriculture—Biological Survey; No. 15, Revision of Jumping Mice of genus Zapris; Report of 7th Meeting of Australasian Association, 1898; Transactions of Canadian Institute, Supplement to No. 9, Vol. V., Part I.; Journal of E. Mitchell's Scientific Society, 1898, 15th year, Parts I. and II.; Year Book of the Department of Agriculture, U.S.A., 1898; Report of Marlborough College Natural History Society, 1898; Annals of New York Academy of Sciences, Vol. XI., Part III.; Recent Research in Egypt, by W. F. Petrie; A Preliminary Account of Archæological Field Work in Arizona in 1897, by J. W. Fewkes; A new group of Stone Implements from Lake Michigan, by W. A. Phillips; A Study of the Omaha Tribe, by Alice C. Fletcher;

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Anales del Museo Nacionales de Buenos Aires, VI.; Communicaciones del Museo Nacional de Buenos Aires, 1899; Bulletin of the Geological Institute of Upsala, Vol. IV., Part I.; Proceedings of the Holmesdale Natural History Club for the year 1896, 1897, and 1898; Transactions and Proceedings of the Botanical Society of Edinburgh, Vol. XXI., Part III.; Berwickshire Naturalists' Club—The Session Book of Bonckle.

The Librarian reported that a copy of Dr Munro's book, entitled "Prehistoric Scotland," had been purchased for the Library.

SECRETARY'S REPORT.

The Secretary (Dr J. Maxwell Ross) then read his Annual Report. During the session there had been 10 deaths or resignations among members, and 7 new names had been added to the roll, which now contained 16 honorary members, 14 life, and 188 ordinary. A distinguished honorary member, Mr Peter Gray, who had done much good work for the Society, died shortly after the last monthly meeting. Seven monthly and two field meetings were held. At the former twelve papers were read, and a lantern demonstration given, besides specimens of Roman tiles and tesseræ and a collection of pebbles, ores, &c., were shown. The field meetings were to Thornhill, Penpont, and Tynron, and to Moffat and Moffatdale.

TREASURER'S REPORT.

The Treasurer (Mr J. A. Moodie) read his Annual Report, from 1st October, 1898, to 30th September, 1899:—

CHARGE.

Subscriptions from 151 Members at 5s each		£37	15 0
Do. ,, 9 ,, 2s 6d each		1	2 6
		£38	17 6
Entrance Fees from 3 New Members		0	7 6
Arrears of Subscriptions paid		2	10 0
Subscription paid in advance		0	5 0
Copies of Transactions sold		1	18 6
Interest on Bank Account		0	8 1
Balance due to Treasurer	£8 19 11		
Less Balance in Savings Bank	0 12 6		
		8	7 5
		£52	14 0

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DISCHARGE.

Balance due Treasurer at close of last Account		£13	12 0
Less Balance in Savings Bank		0	4 5
		£13	7 7
Paid Salary of Keeper of Rooms and additional Allowance for Heating Rooms during Winter Months		3	0 0
Paid for Stationery, Printing, &c.		0	13 0
Paid for Periodicals and Books		3	4 1
Paid for Coals and Gas		0	9 11
Paid Fire Insurance Premium, less bonus		0	0 0
Paid Expenses of calling Meetings:—			
Post Cards	£3 15 4		
Addressing same	0 18 0		
Printing same	1 1 0		
		5	14 4
Paid Expenses of publishing Transactions for last year as follows:—			
Dumfries Standard for Printing.. ...	£24 4 7		
Postage of Transactions	1 6 7		
		25	11 2
Miscellaneous Payments		0	13 11
		£52	14 0

Statement as to the cost of publication of "Birrens and its Antiquities," for year ending 30th September, 1899 :—

Balance due to the Treasurer as at 30th September, 1898 ...	£11	7 10
Less Copies of Book sold during the year...	0	7 0
	£11	0 10

ELECTION OF OFFICE-BEARERS.

The following were then elected office-bearers for the ensuing year:—Hon. President, Mr W. J. Maxwell of Terraughtie; Vice-Presidents, Mr James Barbour, Mr Robert Murray, Provost Glover, and Rev. John Cairns; Secretary, Dr J. Maxwell Ross; Treasurer, Mr John A. Moodie; Librarians and Curators of Museum, Rev. Mr Andson and Mr James Lennox, F.S.A.; Curators of Herbarium, Mr Scott-Elliot and the Misses Hannay; Members of Council, Mr James Clark, Mr William Dickie, Mr James Davidson, Mr W. J. Maxwell, Terregles Bank, Mr J. M'G. Sloan, Dr Clarke, Mrs Thomson, Mrs Brown, and Miss Hannay.

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COMMUNICATIONS.

The Place Names of the Cairn Valley.

By Dr J. W. MARTIN, Holywood.

I do not know that I shall have much to offer you by way of what is new and undiscovered, but I have thought it might be useful to bring up before the members of the Society the subject of place names, and for that purpose I have selected the locality with which I am best acquainted, and which is most easy of access to me, namely, the region of the Cairn from its source till it joins the Nith, and which very aptly comprehends the three parishes of *Glencairn, Dunscore, and Holywood*, or a length of, let us say, 30 miles, by a breadth of 7½ at the broadest point. It may be that the members of the Society may be stimulated into working up other parts of Dumfriesshire not so accessible to those of us in this district, and thus the usefulness of the Society may be extended and enhanced.

Place names are derived from the nomenclature given by the ancient inhabitants of a county or district to the different land-marks and rural objects in the neighbourhood, as well as to the dwellings frequented by them or the new-comers. The *names of places* of any antiquity in the south and west of Scotland are for the most part either of Celtic or Anglo Saxon origin, sometimes spoken of as Northern English. Goedilic or Gaelic was a branch of the Celtic employed by the Picts of Galloway and west of the Nith. It goes without saying *that place names* have retained much of their original form, as far as Goedilic Celtic is concerned, though the inhabitants and people have changed; and a good instance of retention of names of places is found in Bible lands, where, to this day, rudiments of the names of places now almost lost to civilization, are identical with their most ancient names recorded in the Bible and secular history. This is noticeable to any one reading books dealing with Arabia and Palestine, but I need not trouble you with instances. As it is classically put, "Conquest has little power in changing the place names of a county." I need not point out to you that the investigation of the names of places has a considerable bearing on the history, as well as the ethnology and geography, of a county. Unfortunately many names get twisted and changed by mispronunciation and mis-spelling. Much valuable information is thus lost, and identification of the original names is rendered impossible. A

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knowledge of the locality is often essential to the unravelling of a place name, the English speaking population having almost entirely changed it. The locality of the Valley of the Cairn and neighbourhood, where names of ancient and more modern are mixed up, affords us examples of such a discrepancy, though the place names are for the most part fairly easily determined.

It may be well to glance at what were the different races which inhabited lowland Scotland from time to time, and from whom the place names were most likely derived. To begin with, the Roman invasion lasted from B.C. 55 to A.D. 420, but there are few Casters or Cesters, identified with Roman occupation, to be found in the south of Scotland. The most ancient inhabitants that we know of were the Iberians, but there are few if any place names derived from their language, unless it be Urr and Isla (Isle).

The people whom the Romans conquered were the Cymri, or Britons or Welsh, but these had not yet reached this part of Scotland, which was occupied by the Goedilic Celts, the same as the Irish, Manx, and Cornish, and included the Northern and Southern Picts, "the Picti" (Phichti) of Caledonia — the land of trees and forests—who more properly occupied the northern two-thirds of Scotland. These mingled with the Iberian aborigines—characterised as dark-haired, long-skulled, short people, cave dwellers, ethnologically like the Basques, now fast disappearing, and the Atticot Picts west of the Nith and in Galloway. We may place the period about the second or third century.

Associated with these about the fifth and sixth centuries we have the Scots who came from Ireland (Erin), and settled in Lorne and Argyle, and originated the West Highland Clans. (Some of the East Highland Clans, if you may so call them, are French, like the Frazers, Hays, &c.) St. Ninian began his conversion of the Picts about the fourth century. This is a landmark.

It was not till the eighth century that Galloway was conquered by Alpin, King of the Scots, which would have an influence in eliminating the British language. No doubt the names of places would be somewhat established by this time, for we have traces of British words.

Between the sixth and ninth centuries certain adventurers had come from the Continent, viz., the Angles, Jutes, Saxons, and Danes of the Teutonic stock, and these originated the northern English names. Then came the Scandinavian tongue —the people

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who ravaged our shores between the eighth and tenth centuries. Firth and Wick are the common examples of Scandinavian terminations, as also gill, beck, rig, garth, and wald.

Lastly, we have the middle English or broad Scotch, a modification of the Anglo Saxon predominating about the thirteenth century, and it entered largely into the literature of early Scottish history as well as place names. Can it be said to have yet died out? Examples we get are town, hows (O.E. holg), hain or hame, knowe from knoc, pow from poll a stream, law (O.E. hlǽw), monts from monadh, a mountain or moor, kirk for church, gate for way or road, yett for gate, water was weter in O.E.; and in tracing broad Scots names we get to confusion of Gaelic and Celtic names, *e.g.*, bannock, gore, glass, almond for awmon, and so forth.

We know how the cockney changes names in our own day, and the Ordnance Survey has much to answer for in this respect. We may accept it that by this time hills, rivers, cliffs, and all distinctive features of the landscape had received Goedilic names; while habitations, towns, settlements, and fields were of a mixed nature, or purely given by the new-comers. I am told that large islands, especially those inhabited, have Scandinavian names, while mere rocks and the smaller islands have retained the Celtic.

Place names are of two kinds, simple and compound, and compound are either qualitative or substantive. Examples of simple names in the study before us are drum, lag, butt, rigg; compound as Craigenputtock, Barbuie, Dunesslin, Auchencheyne, Brockleston. Substantive place names are Kirkcudbright (St. Cuthbert), Auchencheyne (St. Kenneth), Maxwelton (imported from the name Maxwell), Maccus Villi. Out of 310 place names before me I find 108 have Saxon terminations, like head, 39 of these being ton or tun; 90 are distinctly Goedilic Celtic origin; others are broad Scots; a few are imported proper names, and three are Danish or Welsh. Some are distinctly Norman.

It is noticeable that the further inland you proceed the names are more and more Gaelic, while nearer the estuary the names are mixed, fewer being Celtic; that fact explains itself from history. I have noticed that on the right bank of the Cairn the names are nearly Anglo Saxon, with some exceptions; while the left bank, or watershed, is more markedly Celtic, at times Welsh or broad Scots. The fact may have pointed to the disposition of the peoples. I find the commonest prefixes are Bar, Ben, Craig,

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Dal, Drum, Dun, Bal, Knock, Auchen. A word beginning with Castr has been disputed, and is generally acknowledged to have nothing to do with the Romans.

I shall proceed to give you a vocabulary of most of the place names I have looked into, and for that purpose have used the names of the parishes to denote the district referred to.

I. Glencairn.

Tererran—tir, land or farm, iar, western. (The present proprietor prefers to associate it with Keran or Kiaran, the name of a saint, K becoming T.)

Dibbin—dipping, perpendicular or steep place.

Benbuie—Beann a hill, buidhe of a yellow colour.

Milburn—burn of the mill.

Clarenceton—dwelling of Clarence. Now Cambuscairn (bend of the Cairn).

Neiss—nios top, therefore a height.

Broomfield—modern.

Barjarg—dhearg red, bar height, in Keir.

Barnyard—G. bearnach aird, height with the gaps or fissures.

Carshogle—G. carsg, oglaich, pass of the soldier.

Dabton—Dubh, dun, dark hill.

Keir—G. ciar, dark brown.

Knies—O.E. or Dan. naes, a ness or cape.

Pulcaigrie—Pol water, Crioch boundary.

Tynron—teine, sron, beaconfire point.

Closeburn—cill, church; Osburn, St. Osborne.

Glenhowl—gabhel, a fork, river junction.

Grainshead—O.N. greni, a branch.

Dunreggan—Dun, a hill or fort; chreagain, little crag or rock.

Dungalston—Dungal, abbot de Sacrobosco, 1296, ton, place.

Snaid—snaithad, a needle, narrow communication between two glens.

Gilmourston—Gilmour's dwelling.

Birkshaw—Dan. skor, wood, and birch.

Auchencheyne—Choinneach, G. gen of St. Kenneth, Auchen, field.

Twomerkland—a merk 13s 4½d, land valued at.

Woodlea—Icl.-hlie, shelter.

Craigneston—dwelling at the abutting rock.

Blackston—Black's dwelling.

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Girharrow—garbh, rough, airde, highness.
Craigdarroch—rock of the oak wood.
Townhead—height of the settlement.
Kirkland—lands or locality of the church.
Maxwelton—Maxwell's dwelling, from Maccus Ville, Normandy, Maccus, the son of Murin, a Saxon lord before 1150. (Name taken from some house further down the parish).
Moniaive—Minnyhive, Moine, moss, ghabaidh, dangerous—gh not pronounced.
Glencairn—glen of the heap of stones, or of the river Cairn.
Shancastle—sean old, castle.
Crossford—ford of the cross.
Straith—stratha, a valley.
Barnhead—height.
Wallaceton—settlement of Wallace.
Coldstream—stream, from the coil wood.
Lagganpark—field of the little hollow.
Gravelpit—explains self.
Woodhead—height of the wood.
Huntfield—hunta, a hunter, O.E.
Dardarroch—Dar, dair, or dara, wood of the oaks.
Springvale—valley where springs are found.
Hastings Hall—the manor of Hastings.
Skelston—skali, huts.
Garriston—Garry's farm.
Ardnacloich—stoney height.
Lochurr—odhr, grey loch; G. dobhar, water.
Caitloch—used to be Cadzeloch, place of the battle.
Barbuie—Bar hill, buidhe yellow, as of flowers.
Cairnhead—head of the river Cairn.
Conrick—con a dog, A.S. hrycg, ridge or back of hill.
Blairoch—Blair level, achadoch field.
Lochmailing—maol, a bare round hill; O.S. mailen, a farm; beside the loch.
Ingliston—settlement of the English.
Poundland—land valued at a pound Scots, 20d.
Holmhead—upper part of the meadow near river.
Dalwhat—dal a field, geata, chat, of the wild cat.
Glenlach—tuilach, hill, and glen of.
Corriedow—black ravine.
Glencrosh—glen of the cross.

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Waulkmill—mill where cloth was dressed, Sc. wauk is to "full," or dress cloth; wealcan is to turn about.
Glenwhisk—uisge water, glen of.
Ewanston—Euan's settlement.
Grains—the split or branches of the valley.
Mains—steading.
Glenriddel—Riddel, ancient family name.
Slatehouse—sgleat a slate.
Borland—land of the food supply. Boers or original inhabitants. See "The Raiders." Ingliston and Borland frequently together.
Coatston—G. coid brushwood, sticks, ton dwelling.
Crawfordton—Crawford's dwelling, called the Hill.
Knockauchley—arable or flat field, of the hill.
Brockloch—place of the badger.
Muirwhirn—moor of the rowantrees; also, pfuaran, a spring of water.
Crichen—the boundaries.
Calside—side, coill wood, might be the sunless side O.S.
Shillingland—'sheiling' or booth, land.
Kirkcudbright—church of St. Cuthbert, C. 700 A.D.
Crowhill—croabh trees, or crò a circle.
Breconside—the brake or bracken, and side, slope.
Castlefairn—castillum, village or town, fheàrna, alder trees.
Balenie—baile house, roinne, point of land.
Stronshalloch—stran, a little strath; and seilach (shaloch), the willows.
Auchenstroan—field of the little strath.
Gordiston—Gordon's settlement.
Riggfoot—foot of the furrows or field, O.E. hrick, a ridge.
Barndannoch—the boldness of the height (danachd).
Cleuch—cruach, stack-like hill.
Fleuchlarg—Fleuch, wet (in the sense of rainy), Leathad, slope.
Glenjaan—short glen.
Craiglearn—creagach, rugged rock.
Jarbruck—garbh rough, burg fort, same as borg.
Peelton (opposite)—Peel, W., a moated fort, or tower.
Castlehill—hill of the Castle.
Monigryle—moine moss, thicket, Icl. grœnn, green.
Gapsmill—named from "kep the gap," guard the opening in a fence; from Covenanting times.

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II. Dunscore.

Glenesslin—glen, a valley, ess or eas, water, linne, a pool.
Greenhead—the green headland or hill.
Laggan—a little hollow.
Drum—druim a ridge.
Newton—the new dwelling.
Swyre—O.S., Swair, neck or pass at top of the hill.
Lochmaderie—Loch of the, madah a wild dog, derry, of the oaks.
Dunscore—Dun hill, G. sgor the sharp rock, A. 1300 Dunescor.
Farmersfield—explains self.
Killyleoch—coil wood, leigh, also lago, Sc. for lower.
Lag—hollow.
Netherton of Colliston—the nearer house of M'Call's dwelling.
Farthingwell—baile, house or farm ; farthine, rounded hill.
M'Cubbington.
Glenmidge—glen mheadhow, mid, between.
Isle Toll-bar—Iosal, lower, and toll-bar.
Hopeside—named after Rev. John Hope, minister of Dunscore.
West Skelston—skali huts, shielings.
Shank—tongue of land, O.E. scanca, the leg.
Boglehole—A.S., bogle a fairy.
Dempstertown—(deemster a judge in the Isle of Man), man's name.
Blacksteps—probably from black stones in the stream.
Merkland—land valued at 13s 4d.
Woodfoot.
Throughgate—A.S., geat, passage through, ford.
Allanton—person's name.
Burnfoot and Burnhead.
Bush—Boscus a wood or thicket, Dan. Busk.
Bar—hill of.
Muirhall—recent.
Butt—place abutting or next to.
Lagganhill—formerly Laverock hall ; name changed by new occupiers.
Bogrie—soft ground.
M'Murdoston—family of M'Murdo, founder of the Volunteers.
Dinning—Dinat a woody glen, also Dunan little hill or fort.
Rosehill—where the wild rose was plentiful.
Moat—ancient meeting place.

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Gateside—gat gap, place of.
Friars' Carse—Kerss low lying marshy or alluvial ground by a river.
Carsemill—mill and farm of.
Whiteside—O.E., hwit, white, of the appearance of stones.
Roughhill
Nithside—beside the Nith.
Crawston—Sc., crawe a crow.
Greenwell—grianach, sunny, baile a house.
Longbank.
Linburn—formerly Lintburn, where lint was soaked.
Craigenputtock—the rock of the putag, small ridge or ring of land; by some, rock of the wild hawk.
Dunesslin—Dun a fort or hill, and Ess water, formerly Farthing-rush (rounded hill, covered with scrub).
Corsefield—field of the cross.
Hallidayhill—man's name.
Castrammon—Carstrammon, G. Crasg pass or ford of the Alders, from (craobh, crov) fhearna.
M'Cheyneston, Ellisland, Milliganton, Amulligan 1619.
Courthill—cruit or cul, back and hill.
Townhead—explains self.
Craig—Creag.
Dalgonar—field or plain of the little beak, G., goban.
Moss-side, Poundland, Whitedyke.
Brocklestone—stone of the badger's hill.
Holm—O.E., a small island in a river.
Lagg—valley.
Broadford.
Shangan, Drumshangan—hill or ridge of the ants.
Chapel—probably ancient chapel.
Goosedubs—O.E., puddles for geese.
Miltonmill.
Kenmuir—head of the moor.
Skinford—sceithan, a bush.
Kilnhouses—kiln for baking bricks.
Stroquhan—struthan, a little stream, and valley of.
Lagganlees—the meadows of the little hollow.
Craigenvey—Creag and bheath (vay) birches, rock of the.
Lochenlee is Lochunlead—lade, a water course.
Bessewalla—old name Barswally, bar, height, bill, shith (shee), top or place, a bhaile, hamlet; O.E., hlaw, a hill.

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Kelliston—Kelly's dwelling, coil a wood.
Whiteyett—O.E., geat, a passage.
Junken—junction of lands.
Gallawards—height of the gallows.
Sundaywell—sean, old taigh house, Fr. ville; used to be a tower or keep.
Drumburleigh—ridge of the tumulus.
Kilroy—ruadah reddish colour (church of the).
Netherlaggan—frequent affix, lower.
Isle—anct. Ilis, Iosal (G.) lower, or island land.
Ancient Names—
Crossengarrioch—Garriston?
Pollogan—Laggan.
Pollocostertan.
Derengorran—Dalgonar.
Durrisswan—Stroquhan.
Athenwarn—ford of the rejoicing.
Pollechonstergan.

III. Holywood.

Broomrigg—hrick, ridge, where broom grows.
Gulliehill—the hill of the gully or clift.
Hardlawbank—boundary land.
Holywood—sacrum nemus, the Dar Congal, Thicket of St. Congal, hence the Holywood Abbey, founded 1135.
Portrack (used to be Portract)—tract of land near mansion.
Nith—Niduari of Bede, Pictish tribe of Galloway.
Bellfield—Billa (Bile), a large tree.
Glengowan—gobhan a goat, glen of the.
Hulton—belonging to the Hall, or family mansion.
Speddoch—Ir., spidiog, spiddog, Robinredbreast (wood of the) redbreasts.
Shawford—ford of the wood.
Scaurbrae—sgurr, precipice, large conical hill, Sc., brae.
Bearcroft—O.E., Bere, barley, croft field.
M'Whanrick—M' (muir), magh, plain, Bhainne milk, O.E., hrycg, ridge of land; might be anct. Macwatter.
Crossleys—fields of the cross, anct. Corsleis.
Morrinton—person's name (Morrin).
Irongray—(G.) aird an greaich, height of the moor.
Killylung—coille wood, and G. Luinge, a ship.

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Holm—small island in a river.
Cowhill—coil, wood and hill.
Summerhill—surname (Summers).
Abbey—from Holywood Abbey.
Standalane—O.E., stan, a tall rock by itself.
Gribton—Grib's ton (village or dwelling).
Clouden—clwyd warm, afon or ân, stream or river, also clith, violent.
Cormaddie—hill of the dog or wolf.
Birkhall—house of the birches.
Rue—Rudha, a point of land.
March-house—march line of division between lands.
Knowehead—Sc., knowe, hillock, top of the hill.
Berryland—the hill land.
Fourmerkland—land valued at 4 merks (54s 8d); Fourmerkland Tower built by R. Maxwell 1590.
Newtonairds—the new dwelling of the height.
Balfreggan, Barfreggan—hill of the blackberry.
Looberry—lub a bend, curvature, high hill.
Clachan—collection of houses.
Steilston—O.E., stoel place, ton dwelling, hostelry.
Slaethorn Croft—slae is sloe; G., croit, pendicle of land.
Dalawoodie—Dail fields of, bheadaig, gossip or wanton.
Kilncroft—cille church, croft, field.
Ashyholm—O.E., aesche the ash tree, holm.
Kilness—cille church, nios top, summit.
Baltarsan—house at the crossing.
Druidpark—probably from Druim, a ridge.
Dumfries—Dun fort, of the Frisians; some say of the furze or whin.
Solway—O.N., söl.-vagr. muddy bay.

Such are most of the names in the watershed of the River Cairn, extending through the parishes named to the west of Dumfriesshire. It has been attempted to give the most likely interpretation of them, and if bringing this subject before the Society might somewhat advance the work of place-names in the county, this work may not have been done in vain.

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16th November, 1899.

Mr JAMES BARBOUR, V.P., in the Chair.

Donations and Exchanges.—Annual Report of the Smithsonian Institution for 1896; Transactions of the Nova Scotia Institute of Science, Part I., Vol. IX.; Annals of the New York Academy of Sciences, Vol. XII.; International Catalogue of Queensland Scientific Literature; Guide to Queensland; Proceedings of the Academy of Natural Sciences.

COMMUNICATIONS.

Notes on an Old Tradition.

By the Rev. JOHN CAIRNS.

About six miles to the north-west of Dumfries the River Cairn unites its waters to those of the Cluden, which comes tumbling from its source among the Irongray hills down a rocky course, the most picturesque part of which is the fall at the Routin' Bridge. Below the junction the river sometimes bears the name of the Cairn, which is much the larger of the two uniting streams, but it is more frequently known as the Cluden, and it is thus designated on the Ordnance Map. That it has been so called from early times is shown by the names of such places as Cluden and West Cluden on its banks and Lincluden at its mouth. Above the junction the Cluden is popularly known as the Old Water, and it is so marked on the Ordnance Map.

An interesting explanation of these facts is afforded by an old and very persistent tradition current in the neighbourhood, according to which the Cluden originally had the valley to itself, the Cairn being an intruder of comparatively recent date. It is affirmed by this tradition that at one time the Cairn expanded into a loch above Dalgoner, in the parish of Dunscore, and that the outlet from this loch was to the east and not to the south, the river finding its way by the valley which runs down by Birkshaw, Lag Tower, and Glenmids to the Nith a little below Auldgirth. The tradition goes on to say that in the Middle Ages the monks of Melrose, to whom a grant had been made of the lands of Dunscore, with a view to the improvement of their property, drained the loch at Dalgoner by cutting a new outlet for the Cairn through a rocky barrier, on which it is even said

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that the marks of tools can yet be seen, and so caused the river to flow first into the bed of the Glenessland Burn and then into that of the Cluden below the Routin' Bridge. Another form of the tradition makes the Romans and not the Melrose monks the engineers of the diversion, but that the diversion, by whomsoever effected, has taken place it is confidently affirmed. Hence, it is said, come the facts I have already referred to, that the smaller stream gives name to the combined stream below the junction, and that the same stream above the junction is called the Old Water. Hence, too, comes the further fact that beside the supposed original course of the Cairn there is a farm which to this day bears the name of Cairnhall.

The fact of this tradition being so definite, so long established, and so persistent as many of us here know it to be, almost seems to establish a kind of *prima facie* presumption in its favour; but it may be pointed out that those arguments in support of it to which I have just referred have less in them than might at first sight appear. It is no uncommon thing for the smaller of two uniting rivers to give its name to the product of their union. The Teith is a much larger and finer river than the Forth, and yet it has to yield its name to its weaker rival. So too with the Missouri and the Mississippi. Then as to the Old Water, Sir Herbert Maxwell has pointed out that we have here an instance of a mistaken etymology due to a resemblance in sound of two entirely different words. Speaking of the name as it appears on the Ordnance Map, he says: "A common Gaelic word for a stream is *allt;* this coincided in sound with the broad Scots 'auld;' apparently those who advised the English surveyor thought it more genteel to write 'old,' and the real significance is completely hidden by a forced interpretation." With regard to Cairnhall, it may be remembered that there is a Cairn Mill on the Scar, in the parish of Penpont, far away from any possible former course of the Cairn; so too much need not be made of that point.

Whether the diversion of the river in the way the tradition states was physically possible I do not profess to be able to say, but must leave that to those better acquainted with the topography and geology of the district. Whether, too, as I have heard it said, the tradition finds confirmation in certain ancient charters or title deeds I am also unable to say, for I have not had the opportunity of examining them. But some time ago I had

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occasion to look into the Liber de Melros, which is a collection of all the charters of the famous abbey on the Tweed, and is one of those splendid volumes edited for the Bannatyne Club by the late Mr Cosmo Innes. Here I came upon the original grant of the lands of Dunscore to Melrose, and as this, besides being of great local interest otherwise, does seem to throw light on the tradition of which I have been speaking I should like now to quote its words to you. The granter of the lands is a lady, Affrica, the daughter of Edgar, and the great-grand-daughter of the powerful chieftain Dunegal, who, in the reign of David I., ruled over Nithsdale from his seat at Morton Castle. Affrica's charter was granted in the reign of Alexander II. (1214-1249). After the usual beginning, in which she says that she was induced to make this grant for the repose of the souls of the late king and of her own ancestors and successors and for the salvation of her own soul, Affrica proceeds to specify the boundaries of the land which she bestows on the monks:—"I have given and conceded to God and to St. Mary of Melrose and to the monks serving God there in free, pure, and perpetual charity, one-fourth part of the land in the territory of Dunscore, that, namely, which lies between Dercongal and a certain rivulet which is called Pollogan, according to its proper marches. And besides, from Pollogan, by a rivulet which descends from the moss to the west and so from the moss by a rivulet which descends to the ford of the Cairn towards Glenesslan and so by the Cairn towards the east as far as the rivulet which is called Pollocostertan and so upwards as far as Crossengarriauch, which is the march between the land of the canons of Dercongal and Derengorran ascending by the road as far as Durreswan, and thence descending by a heap of stones to a certain ditch, and from that ditch descending almost straight to the before-mentioned rivulet, namely, Pollogan." What are we to make of these strange and uncouth names, which have all or nearly all disappeared from the face of the earth and from the memory of man? Not very much certainly, but yet perhaps something. The first sentence is plain enough. Affrica gives the land which lies between Dercongal or Holywood (for this is the old name of the monastery of Augustinian Canons which had already been erected there) and the stream called Pollogan. The prefix Pol means (I suppose in Gaelic) a stream. It is the very word that has been corrupted into our Scotch word Pow, which occurs in such names as Pow-

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foot and Newabbey Pow in this district, not to speak of the Powburn in Edinburgh. Pollogan, then, is the Logan Pow, clearly the Laggan Burn, up whose valley the road from Auldgirth to Dunscore runs. The district, then, between the lands of Holywood, which probably extended to the modern parochial boundary, and the Laggan was included in this grant. And this is confirmed by the fact that at a much later date we find Melrose Abbey granting to members of the family of Kirkpatrick of Ellisland certain rights over the properties of Laggan, Edgarstoun, Milliganton, M'Cheyneston, M'Cubbinton, Kilroy, and Farthingwell, all of which, I believe, are within the limits thus marked out in Affrica's charter. But when we come to the second part of the charter we find greater difficulties. I cannot find any perfectly satisfactory solution of the puzzle which it presents, and would now with the greatest diffidence and full submission to the authority of those who know the district better than I do, make the following suggestions. Besides the country between Holywood and the Laggan, Affrica gives a tract of land whose boundaries are very minutely specified. Beginning at the Laggan the boundary goes up to the moss along the course of a small rivulet. This, I take it, must be the moss, a part of which still exists in the high land to the south-west of Dunscore village. From thence a rivulet leads down to "the ford of the Cairn towards Glenessland." A very small stream is marked on the map crossing the road between Craig Free Church and Poundland and falling into the Cairn lower down. This may be the rivulet referred to, which was evidently so small that it did not possess a name. Then following the Cairn "to the east" we come to the burn which passes Killyleoch. This may be the Pollocostertan of the charter, and this finds confirmation in the fact that Killyleoch and Bessiewalla, both of which are on or near its banks, belonged at a later date to Melrose Abbey. Up this burn the boundary ascends to Crossengarriauch, "which is the march between the land of the canons of Holywood and Derengorran." In a later charter this is spoken of as "the cross which is called Crossengarriauch." So evidently there was here erected, perhaps on the wayside, a prominent and well-known cross. Is it possible that there is still a trace of this to be found in the name of the farm of Corse or Corsefield, situated at the top of the hill just where, from the words of the charter, we should expect the ancient landmark to have stood? From thence

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by points that cannot now be easily identified—a heap of stones, a ditch, &c.—the boundary finds its way back to the Laggan at the point from which it started. But however interesting this mass of topographical detail may be for its own sake, I fear I have lingered too long over it, and I must now point out the bearing which it has upon the tradition regarding the diversion of the Cairn. You will notice that mention is made of the Cairn in this charter and of a ford in it towards *(versus)* Glenessland. But those of you who know the district will remember that this, the lower end of Glenessland, the place where Glenessland Burn falls into the Cairn, is *below* the point where the Cairn is said to have been diverted. If the tradition be true there was, when the land came into the possession of the monks of Melrose, no Cairn in the neighbourhood of Glenessland at all, and as it flowed through a loch at its nearest point there could be no "ford of the Cairn" within several miles. And yet here, in the charter which gives the land to the monks, the Cairn is described as following the same course as it follows to-day.

A later charter describes what is evidently the same, or virtually the same, tract of land, but begins this time not at the Laggan but at Crossengarriauch.

After describing the boundary from Crossengarriauch to the Laggan it goes on: "And by Pollogan, ascending as far as the royal road, which leads from Dercongal (Holywood) to Glencairn, and by the same road as far as the ford in a certain ditch which is called Athenweran, and as the same ditch descends to a certain footpath which leads to the ford of the Cairn, and by the river Cairn, ascending as far as a certain rivulet, which is called Pollechoustergan, and by the same rivulet, ascending as far as the before-mentioned cross, which is called Crossengarriauch." I confess I can make nothing of this description. The perplexing point is that which speaks of ascending the Cairn from the ford. In the former charter the boundary follows the Cairn "towards the east," which, of course, is descending, and if the word were descending here it might be possible to identify Pollechoustergan with the Pollecostertan, even although a little violence were used in the process; but the word is undoubtedly "ascending" in the text, and I can only leave the tangle for some more skilful hands to redd up.

There is only one more document in the Book of Melrose which in any way bears on our tradition, and that is one which,

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had it stood by itself, might have lent countenance to it. It is a charter of King Alexander II., in which he gives to the monks of Melrose "the lake of Dunscore, in the valley of the Nith, and the pennyland which belongs to the said lake, and whatever is contained within the said lake and land." This, if it stood alone, *might*, I say, lend countenance to the theory that in the thirteenth century there was a lake in the valley of the Cairn. It is true it is called the valley of the Nith here—but that is clearly used in a wide sense, for the same designation is employed in the title of the two charters we have already been considering, which deal explicitly with the valley of the Cairn. The granting of the lake too, to the monks of Melrose might also lend countenance to the tradition that these same monks afterwards drained a lake on their property. But it seems to me that the phrase in the first charter of which I have spoken, about the ford of the Cairn "(looking) towards Glenessland," is, so far as it goes, positive evidence that the Cairn in these days followed the same course that it follows now, and consequently that there was then in all probability no loch in its course. It must be remembered, further, that there is another loch in the parish of Dunscore, viz., that at Friars' Carse, which is on land which we know belonged to Melrose Abbey, so this might quite well be the lake of the charter.

The general conclusion, then, seems to be that, so far as the monks of Melrose are concerned, the great engineering work of which our traditions speaks was not carried through, and did not need to be carried through. Whether it was carried through at an earlier date than theirs is, of course, another question which I have at present no means of answering.

The following is the text of the extracts from charters, of which translations are given in the foregoing paper :—

I. CARTA AFFRICAE DE VALLE DE NITH.

"Universis Christi fidelibus hoc scriptum visuris et audituris Affrica, filia Edgari, salutem in Domino. Noverit universatis . . . me . . . dedisse et concessisse et hac mea carta confirmasse Deo et ecclesiae Sanctae Mariae de Melros et monachis ibidem Deo servientibus in liberam, puram, et perpetuam elemosinam unam quartam partem plenarie villae in territorio de Dunscor, illam scilicet quae jacet inter Dergungal et

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quendam rivulum qui dicitur Pollogan per suas rectas divisas; et praeterea de Pollogan per rivulum qui descendit de mussa versus occidentem, et ita de mussa per rivulum qui descendit in vadum de Carno versus Glenesclan, et ita per Carnum versus orientem usque ad rivulum qui dicitur Pollocostertan, et ita sursum usque ad Crossgarriauch quod est meta inter terram canonicorum de Dercongal et Derengorran ascendendo per viam usque Durreswen, et inde descendendo per cumulum lapideum usque in quendam sicum, et ab illo sico fere recte descendendo usque in rivulum antedictum, scilicet Pollogan." . . (Liber de Melros 200, p. 182).

II. CARTA AUFRICAE DE VALLE NITH.

". . . Noverit universitas . . . me . . . dedisse et concessisse et hae mea carta confirmasse Deo et ecclesiae Sanctae Mariae de Melros et monachis ibidem Deo servientibus, in liberam, puram, et perpetuam elemosinam, quandam partem terrae meae in territorio de Dunscor quae continetur infra has divisas; scilicet, a cruce quae dicitur Crossgarriauch quae est meta inter terram canonicorum de Dercongal et Derrengorran, ascendendo per viam usque Durreswen, et inde descendendo per cumulum lappideum usque in quendam sicum, et ab illo sico fere directe descendendo usque in quendam rivulum qui dicitur Pollelogan, et per Pollelgan ascendendo usque ad regiam viam qua itur de Dercongal usque ad Glencarn, et per eandem viam usque ad vadum cujusdam sici quod dicitur Athenweran, et sicut idem sicus descendit usque ad quandam semitam quae ducit ad vadum de Carn, et per fluvium de Carn ascendendo usque ad quendam rivulum qui dicitur Pollechoustergan et per eundem rivulum ascendendo usque ad prenominatam crucem quae dicitur Crossengarriauch." (Liber de Melros 201, p. 183).

III. DE LACU IN VALLE DE NITH PRO PITANCIA.

"Alexander, Dei Gratia, Rex Scotorum omnibus probis hominibus totius terrae nostrae salutem. Sciant presentes et futuri nos . . . dedisse et concessisse et hac carta nostra confirmasse Deo et Beatae Mariae de Melros et monachis ibidem Deo servientibus et in perpetuum servituris, lacum de Dunscor in valle de Nyth et denariatam terrae quae pertinet ad eundem lacum et quicquid continetur infra eundem lacum et terram." (Liber de Melros 203, p. 185).

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19th January, 1900.

Mr JAMES BARBOUR, V.P., in the Chair.

New Members:—Captain Campbell-Johnston of Carnsalloch; Messrs John Tocher, Chemist; Robert Service, Nurseryman; M. H. M'Kerrow, Solicitor.

Donations and Exchanges:—Proceedings of the Academy o Natural Science of Philadelphia, Part II., April-Sept. 1899.

COMMUNICATIONS.

The Meteorology of 1899.

By the Rev. Mr ANDSON.

Barometer.—The highest reading of the barometer in 1899 was recorded on 26th January, when it rose to 30·732 in., and the lowest at 4 p.m. on the 29th December, when it fell to 28·377 in., showing an annual range of 2·355 in. The latter was the lowest reading since 1886, the next lowest having been 28·380 in. in 1891. Although this depression was so abnormal, it was not accompanied by so violent a gale of wind or so heavy a rainfall, in this district at least, as might have been expected. But the wind having been from the east, it was more severely felt on the eastern coasts. The gales in the early part of November, which were from the south and south-west, were much more tempestuous, and attended by far heavier rainfalls, although the barometer readings were mostly above 29 in., and only once went down to 28·98 in. The mean barometrical pressure for the year (reduced to 32 deg. and sea level) was 29·922 in. This is higher than the mean of the last twelve years by 0·091 in., 29·922 in., as compared with 29·831 in. The months in which the means were highest, exceeding 30 in., were May, June, July, August, and November. And these were all favourable months in point of temperature and weather on the whole, excepting May, which was cold and wet. The lowest monthly mean was in January, which had twenty-three rainy days, and the next in September, which had twenty-two.

Temperature in shade, 4 feet above the grass.—The highest temperature of the year occurred on the 2nd August, when a maximum of 85 deg. was registered. The lowest or absolute minimum occurred on the 15th December, when a reading of 13

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Abstract of Meteorological Observations at Dumfries, 60 feet above Sea Level.

1899.	BAROMETER.				THERMOMETER. In Air and Protected.						HYGROMETER.		Deductions. Glaister's Tables 2nd Ed.		WINDS.									RAIN.	
															Number of Days it blew in certain Directions.										
Months.	Highest in Month.	Lowest in Month.	Monthly Range.	Mean reduced to 32 degs. and Sea Level.	Maximum.	Minimum.	Monthly Range.	Mean Maximum.	Mean Minimum.	Mean Temperature.	Dry Bulb.	Wet Bulb.	Dew Point.	Humidity. Saturation = 100.	N	NE	E	SE	S	SW	W	NW	Calm or Variable	Number of Days it Fell.	Amount in inches.
Jan.	30·732	28·700	2·032	29·704	52·0	18·8	33·2	43·4	32·7	38·0	37·6	36·9	36 0	94	2	1	1	4	5	10	3	4	1	23	5·27
Feb.	30·545	28·810	1·735	29·795	55 0	20·0	35·0	46·5	33·7	40·1	39·3	37·5	35·2	86	2	2	3	4	5	4	2	3	3	13	3·35
Mar.	30·533	28·935	1·598	29·990	64·0	19·0	45·0	48·8	34·7	41·7	41·9	39·7	36·9	85	3	2	1	1	2	11	7	3	1	15	4·59
April	30·225	28·957	1·268	29·746	60·0	27·0	33·0	51·8	38·1	45·0	44·3	42·2	39·7	84	2	4	1	4	3	5	5	5	1	18	3·25
May	30·550	29 300	1·213	30·018	71·0	31·0	40·0	57·4	39·8	48·6	48·8	44·9	40·4	73	1	7	8	2	2	7	2	1	1	14	3·44
June	30·541	29·436	1·105	30·054	84·0	43·2	40·8	71·6	50·1	60·8	60·0	55·6	51·7	74	1	2	5	4	2	5	6	3	2	12	2·44
July	30·487	29·060	1·075	30·062	81·6	47·0	34·6	69·2	54·1	61·6	60·1	56·9	54·1	81	0	3	2	2	3	11	3	7	0	18	2·17
Aug.	30·443	29·620	0·763	30·078	85·0	45·0	40·0	74·3	52·2	63·2	62·0	58·2	55 0	78	0	4	3	6	2	6	7	2	1	10	1·69
Sept.	30·225	29·163	1·048	29·764	76·0	35·0	41·0	62·6	45·2	53·9	52·3	49·7	47·1	82	0	1	1	1	1	9	12	4	1	22	3·05
Oct.	30·440	29·389	0·999	29·998	63·3	26·0	37·3	56·7	39·3	48·0	46·3	44·4	42·3	87	2	1	2	3	5	7	6	4	1	13	2 72
Nov.	30·713	28·987	1·726	30·011	58·0	28·0	30·0	51·8	42·5	47·2	47·3	45·5	43·6	88	0	2	1	2	3	13	7	0	2	16	5·52
Dec.	30·465	28·377	2·088	29·833	53·0	13·0	40·0	40·5	31·4	36·0	34·6	33·5	31·8	90	0	2	8	6	1	3	5	4	2	15	3·19
Year	30·732	28·377	2·355	29·916	85	13	72	56·5	41·1	48·6	48·5	46·2	43·7	83	13	31	36	39	34	91	65	40	16	189	40·86

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deg. was recorded. The annual range thus amounted to no less than 72 degs. It is worthy of remark that August had not only the highest single-day temperature of the year, a distinction which most frequently falls to June or July, but that it had also the highest monthly mean, viz., 63·2 deg., which was fully 5 deg. above the average for that month. August was an unusually warm and dry month, with a good deal more than the average amount of sunshine. And this was true also, although not to the same extent, of June and July. On no fewer than eleven days in August the thermometer in the shade registered readings of 80 deg. and above, and only on a very few nights did the minimum readings fall slightly below 50 deg. The mean maximum for August was 74·3 deg., and the mean minimum 52·2 deg., which gives the monthly mean of 63·2 deg. There were other four months in which the mean temperature was in excess of the average, viz., June with an excess of over 2 deg., July with an excess of 1½ deg., October with 2 deg., and November with fully 5 deg. The excess was thus in all about 16 deg. On the other hand, the months in which the mean fell short of the average were April with a deficiency of 2 deg., May of 4 deg., September of 1½ deg., and December of 3 deg. This gives an aggregate deficiency of fully 10 deg., which was more than counterbalanced by the 16 deg. of excess. Hence the name temperature of the year is, as might have been expected, above the average, although not to the same extent as last year. The mean annual temperature, calculated on an average of 12 years, is 47·5 deg. Last year it was 49·5 deg., which was one of the highest of the 12. This year it was 48·6 deg., which is rather more than 1 deg. above the average. There were more than the usual number of warm days during the summer—days with a maximum of 70 deg. and above. There were only two in May, which was a cold month; but there were sixteen in June, fifteen in July, twenty in August, and four in September—in all, 57. The number of nights on which the temperature fell to and below the freezing point was eighteen in January, with an aggregate of 61 deg. of frost, fourteen in February with 56 deg., eleven in March with 56 deg., October had six nights with 18 deg., November only three with 4·3 deg., December eighteen with an aggregate of 114 deg. of frost. As August was the warmest, so December was by far the coldest month of the past year, the monthly mean of which—viz., 37·4 deg.—was 3 deg. below the

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average. The absolute minimum of 13 deg. on the 29th of that month was the lowest December reading since 1886, and the lowest in any month since the extreme frost in February, 1895, when the thermometer went down a little below zero. On both occasions the river Nith was frozen over; but in December last this condition lasted but a brief period, and the ice was not so strong as to be safe for skating or curling. On the whole, the year was a favourable one in point of temperature. Had it not been for the comparative coldness of April and May, and the spells of severe frost in the second and last weeks of December, it would have been one of the warmest years of the period of observation.

Rainfall.—The number of days on which rain or snow fell during 1899 was 189 (rain 181, snow 8). This is a little above the average, which may be reckoned at 177. The heaviest fall in 24 hours was registered on 28th March, and amounted to 1·80 in. It occurred in connection with a south-westerly storm of considerable severity. But there were two other months in which the fall for 24 hours exceeded 1 in., viz., on 28th June and 3d November, on each of which days it amounted to 1·01 in. So heavy a fall as 1·80 in. in 24 hours, amounting as it does to 180 tons of water per acre, is very rare in this district. For the most part it is only two or three times in a year that it amounts to or exceeds an inch. The total fall for the year was 40·86 in. This exceeds the average of 12 years by fully 5 in., the mean for that period being 35·57 in. The rainiest month was November, which had a record of 5·55 in., by far the greatest part of which, however, fell in the first two weeks, and was followed by extremely fine weather in the second half of the month. I have noted that on the 4th November the Nith was in very heavy flood. Not only were the Sands flooded, but the water rose as far as the new buildings in Friars' Vennel, and in Nith Street as far as the junction with Irish Street. The depth of the river as shewn by the gauge at the New Bridge was about 12 feet. The rainfall of January was very little short of that of November, amounting to 5·27 in. Twice in that month the barometer fell below 29 in.—on the 12th, when it went down to 28·550 in.; and again on the 21st, when the lowest reading was 28·976 in. The month as a whole was stormy and wet, with strong southerly and south-westerly gales, and moderate temperature until the last week, when a spell of sharp frost was experienced. The driest as well

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as warmest month of the year was August, with a record of only 1·69 in., and 10 days on which it fell, as compared with a mean of 4·16 in. The months in which the rainfall was in excess of the average were January, February, March, April, May, and November, with a total excess of about 10 in. The months in which there was a deficiency were July, August, October, and December—total deficiency, 5 to 6 in. It was in the summer months of July and August that the largest deficiency occurred, and although September shewed a slight increase it was more than counterbalanced by the deficiency in October. There were two periods which might be described as periods of partial drought. The first was between the 25th of May and the 17th of June, 24 days during which there was only once a slight shower, which measured no more than one hundredth of an inch, on the first day of June. Notwithstanding, the rainfall of June as a whole was up to the average, the latter part of the month having been characterised by frequent showers. The second period was between the 29th July and the 26th August, during which there were only five days on which any rain fell, and only to the amount of four-tenths of an inch.

Hygrometer.—The mean of all the readings of the dry bulb thermometer for the year was 48·5 deg. It is worthy of note that this almost exactly corresponds with the mean temperature of the year, which was 48·6 deg., as calculated by a different method, viz., by taking the mean of all the maximum and minimum readings. The readings of the dry bulb thermometer are taken twice a day, at 9 A.M. and at 9 P.M., and it is the mean of these which brings out a result differing by only one-tenth of a degree from the mean of the maxima and minima. This shows how nearly these different methods bring out the same result, and the coincidence is not fortuitous. It is only what is to be expected, so that the one may be considered as a verification of the accuracy of the other. The mean of all the 9 A.M. and 9 P.M. readings of the wet bulb thermometer was 46·2 deg., which makes the dew point 43·7 deg. and the relative humidity for the year (saturation being equal to 100) 83. This is slightly above the average annual humidity, which was to be looked for, when we take into account the slight excess both of rainfall and of the number of days on which it fell.

Thunderstorms, &c.—I have noted thunder and lightning six times during the year—once in February, once in May, twice in

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June, once in August, and once in November. And thunder without lightning twice. A very marked solar halo was seen on the 22d October, and lunar halos pretty frequently. Hail showers were noted in January, February, March, April, and May.

With regard to the wind directions, the south-westerly was as usual the most prevalent. It blew on 95½ days of the year. The next in point of frequency was the westerly, with 64 days. The north-westerly came next with 40 days; then south-easterly with 39½; easterly with 35½; southerly with 31½; north-easterly with 30½; northerly with 14; and calm or variable with 14½ days.

A paper by Dr E. J. Chinnock, entitled "Ptolemy's England," was read.

9th March, 1900.

Rev. Mr ANDSON in the Chair.

Donations and Exchanges.—Bulletin of the Geological Institute of Mexico; Smithsonian Report, 1897; Report of British Association Meeting at Dover.

COMMUNICATIONS.

1. *On the Nesting of the Nightjar in Glencairn.*

By Mr JOHN CORRIE, Moniaive.

It may be of interest to record a well-authenticated instance of the nesting of the Nightjar in Glencairn, Dumfriesshire. I was previously aware that the bird occurred in the district, but, so far as my knowledge goes, this is the first time that it has been discovered nesting.

My earlier records of the occurrence of the species are as follows:—

1. A single specimen seen hawking for moths in my own garden towards nightfall in the summer of 1888.

2. Bird heard uttering its distinctive churring cry during a night-fishing excursion to Knocksting, a small loch situated on the border of Kirkcudbrightshire.

3. An immature specimen, found in a garden on the outskirts of Moniaive, brought to me for identification, 23rd September, 1896.

These, and a reported occurrence of the bird near Craigdarroch in day-time, are all the records known to me. None of

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them, it will be noticed, furnish proof that nesting had taken place in the parish, although the presence of a young bird in September might be accepted as fairly conclusive evidence that a nest was at that time in the neighbourhood. In the present instance the proof is absolute, for one of the parent birds has been seen, the nest site examined, and the young handled. The facts are as follows :—

On the 8th August last it was reported to me that a cuckoo had been found nesting on the open moor near Girharrow, and that two young birds were in the nest. As a pair of young cuckoos in the same nest is an unusual, although, I believe, not an unprecedented occurrence, my interest was aroused, and I at once commenced inquiries. These had not proceeded far before I found reason to conclude that the bird described to me as a cuckoo was in reality a nightjar. Subsequent investigation established this beyond all reasonable doubt.

I first of all called at Girharrow, which is on the Auchencheyne estate, about a mile and a half distant from Moniaive as the crow flies. Here the wife of the shepherd informed me that the young birds had left the nest, but she kindly offered to guide me to the hollow on the hill where the nest had been found. This offer I gladly accepted. Although no traces of an attempt at nest-construction were visible, the precise site could easily be distinguished by a few pieces of broken egg-shell lying in a slight depression of the ground. The neighbourhood of the nest was singularly bare and exposed, and it is evident that the bird depends upon close imitative colouration, rather than cover, for protection. Believing that the birds would not be far off, a sharp look-out was kept, and, less than a score of yards from the nest site, one of the parent birds, evidently the female, rose quite close to us, and commenced a fluttering, broken-winged sort of flight across the heather. I soon recognised that the object the bird had in view was to lure us away from its young, and I remained near the spot where the bird rose. Here a careful search was made, but to no purpose. The shepherd's wife having meanwhile returned to the cottage, I concealed myself, field-glass in hand, behind a friendly rock. After waiting patiently, in anything but a comfortable position, for fully a quarter of an hour, I had the satisfaction of seeing the female bird return to a spot in the near neighbourhood of the place where we had first seen her. I at once followed, and, although the bird took wing

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at my approach, I soon discovered a young four or five days old fledgling crouching on the heath. The young bird was covered for the most part with soft downy feathers of a tawny hue, although the wings were already beginning to show the characteristic brown barring of the mature bird. The colouration generally was in marked harmony with the surroundings. During the time I was occupied in examining the interesting youngster, the parent bird continued to hover near me, uttering an incessant "Wheet, Wheet!" a note in which solicitude and anger were curiously blended.

Later on I had an opportunity of interviewing Mr Davidson, shepherd, who was the first to discover the nest. He says the discovery was purely accidental. Chancing to pause on his walk across the hill, he saw the bird sitting at his feet, and wondered why it did not take to flight. It was only when he stooped to examine the bird that he discovered its secret.

The nest was visited several times subsequently, both by him and by other members of his family, but the bird never appeared to be alarmed, and was always reluctant to leave its eggs.

It is a matter for satisfaction that a species, which occurs so sparingly, was permitted to rear a brood in safety. Mr Davidson's conduct calls for commendation, and my personal acknowledgments are due both to him and to Mrs Davidson for their courtesy and kindness.

2. *Regarding the Origin of the Ruthwell Cross.*

By Mr JAMES BARBOUR.

The popular account of the origin of the Ruthwell Cross derived from tradition affirms that on being conveyed by sea from some distant country it was shipwrecked at a place called Priestwoodside, in Ruthwell Parish, and the pillar, so destined it was thought, was erected there. Subsequently the monument was removed from its original site for conveyance to the interior, and by way of propitiation for the success of the venture a widow's oxen were engaged, and put to the yoke. After proceeding some way, however, the tackling gave way, and the cross stranded. It was re-erected on the spot where it fell, and a place of worship was reared over it, which became the church of the Parish.

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The point I desire to direct attention to is the idea of the foreign origin of the Cross contained in the tradition, and still prevalent. It is a common way of accounting for the presence of works without a history, and possessing merit superior apparently to any effort of local skill as this is.

I propose to submit some considerations which tend, I think, to give support to the opposite view. These refer chiefly to the material of which the Cross is cut, and its similarity to the rock native to the locality. Should the stone be found to agree with that native to the place, the reasonable inference would appear to be that the Cross was sculptured in the neighbourhood of the spot where it stands, as it is unlikely that the material would be exported in order to its being worked elsewhere, more likely the sculptor may have come from abroad.

The Rev. Dr Duncan, and Professor Stephen, of Copenhagen, evidently incline to regard the material of the Cross as having been taken from some not very distant quarry. The former, to whose care the preservation of the monument is largely due, speaking in support of an opinion that the Cross was executed at two different periods, says:—"The column is formed of two separate blocks of standstone, both of them probably taken from the neighbouring hills, but evidently from different quarries; for although they are both of a course texture and of a reddish colour inclining to grey, such as is to be found in the vicinity, the upper stone is distinctly of a deeper hue than the other."

It is to be observed in this connection that the peculiar variation of the colour, spoken of by Dr Duncan, is a distinguishing characteristic marking the native rock.

The testimony of Professor Stephen is as follows:—"The stone," he says, "is a hard red grit found near Dumfries, some miles away, and might have come by sea. The Ruthwell Railway Station appears to be from the same quarry. The stone of the Bewcastle district is not the same. The style of the sculpture also is different. Neither are the runes alike."

Although the stone of the Ruthwell Railway Station bears a considerable degree of resemblance in some respects to the Cross, it differs materially in respect of the colour, which is light red. The stone was taken from Drumlanrig tunnel and conveyed to Ruthwell on the railway, as Mr M'Kune, railway inspector, who assisted at the quarrying of it, informs me.

But there is no occasion for supposing that the material of

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the Cross was carried from so distant a place as Drumlanrig, or even from the neighbouring hills about Ruthwell, as suggested by Dr Duncan. Rock fulfilling the required conditions is obtainable in the immediate vicinity.

Having occasion recently to examine another interesting and important historical monument in the same parish—the old Castle of Comlongon, standing not far from the Cross—I was struck with the appearance of the freestone forming the dressings, which is of a character I had not observed in other buildings in the district. The blocks vary both in colour and texture, but some of them seem to agree exactly in these respects and otherwise with the material of the Cross. It has not been ascertained where these were got, but as field stones about are of similar rock it may be inferred that the quarry was a local one. On further inquiry it was ascertained that during the construction of the Glasgow and South-Western Railway one of the contractors worked a quarry at a place about 300 yards north of the Ruthwell Station, the position of which is still apparent from the remaining debris. A fragment of stone obtained at this place is found to exhibit all the characteristics of the rock out of which the Cross is formed, as will appear from the following details :—

The rock composing the blocks of which the Cross is built distinctly differs in colour and in general appearance from the common Dumfriesshire red stone. It is a hard sandstone, of coarse texture, and a purplish grey colour, marked with glimmerings of mica. A peculiarity already alluded to in connection with Dr Duncan's description consists in a difference of the hue of the upper and lower blocks forming the shaft. The upper block is stained blood-red, but the stain does not pass quite through the stone, and one face retains the general hue, a circumstance which Dr Duncan has evidently failed to observe, and which disposes of the suggestion that the blocks were taken from different quarries, and of the theory that the Cross is of two different periods. The formation of the stone is chiefly silica cemented with oxide of iron ; the predominance of the latter occasions the blood-red stain described. Lime appears to be absent.

In comparison with the Cross, the piece of stone obtained at the quarry near the Ruthwell Railway Station is perceptibly darker in colour and also perhaps closer in texture ; but these

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apparent differences are not greater than may be accounted for by the bleaching and wasting incident to the Cross through the long exposure to which it has been subjected. The Cross itself, apart from the red stain, varies in both respects, and partly at least through unequal weathering. The piece of stone before referred to is of the same formation as the Cross. Although bastard limestone occurs in the district, which was worked at one time, no evidence of lime is found in its composition, and it exhibits at one end a spot of the peculiar blood-red stain which marks so conspicuously one of the pieces of the Cross.

The facts stated are, I submit, fairly conclusive of the stone having been obtained from a local quarry; and it follows that in all probability the Cross was sculptured and first set up in the vicinity where it stands.

It would be interesting could some clue be discovered regarding the author of so famous a monument. Professor Stephen's interpretation of words said to have been inscribed on the top stone is certainly suggestive in this connection—"Caedmon made me" is the rendering. According to the professor it applies to the runic inscriptions on the sides of the Cross; but considering the ancient usage of inscribing the artist's name on such works, and the ordinary and natural signification of the words, it seems at least as likely to apply to the Cross itself.

In closing the paper I may be permitted a word of reference to the sculptures. They are artistically worked, and the treatment of the subjects appears to be well developed. On one side of the base, for instance, there has been a representation of the Crucifixion. It is greatly defaced, and in part quite obliterated. So far as decernible it shows, in the centre of the picture, a large cross with the crucified Christ, of which only the limbs remain. On one side may be traced, I think, indications of a smaller cross. At the foot of the cross were a group of figures. The moon or the sun shorn of its splendour appears in the firmament in allusion to the passage—"And when the sixth hour was come there was darkness over the whole land until the ninth hour." Heavy foulds of drapery frame the picture on either side, the inner edges converging at a point in the centre, and parting widely at top and bottom as if by violence, according with the Scriptures—"And the veil of the temple was rent in twain from the top to the bottom."

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3. *The Roman Name for Birrens.*

By Dr CHINNOCK.

At the end of my paper on the Roman Roads in Britain I asked if anyone could explain the meaning of the Roman name for Birrens—*Blatum Bolgium*. After long search I find that the late Dr Edwin Guest (*Origines Celticae*) has suggested that it means the "Field or District of the Belgians." In the second Road given in the Antonine Itinerary, the three last stations are called Luguballia, Castra Exploratorum, and Blatum Bolgium. Camden, the first of British Antiquaries, identified *Luguballia* with Carlisle, and no one has since disputed the correctness of his decision. *Castra Exploratorum*, or the *Scouts' Camp*, was first identified with Netherby by Horsley, and this is now recognised to be correct. Since his time an inscription has been found at Netherby which speaks of a riding school for cavalry (*Equestris Exercitatoria*), an establishment peculiarly suitable for the Scouts' Camp. All competent authorities, British and foreign, now identify the last Station, *Blatum Bolgium*, with Middlebie or Birrens. About two miles from the site of the Roman Station is that of the strong British fortress called Birrenswark or Brunswark. *Bryn* is the Welsh for a *hill*. At Birrens several altars have been dug up dedicated by soldiers of the second cohort of the legion of the *Tungri*. This shows that the Roman Emperor stationed that legion at Birrens. The Tungri were a tribe of the Belgae, a nation which inhabited the country now known as the north of France and the kingdom of Belgium, from the Seine to the Rhine. The modern town of *Tongres* in Belgium derives its name from the Tungri. The *Belgae* were also sometimes called *Volgae* or *Bulgae*. The name *Blatum Bolgium* was evidently derived from some native or British appellation which was adopted by the Romans. Now there are four dialects still extant of the old British or Celtic language—the Gaelic, the Irish, the Manx, and the Welsh. I consulted the Gaelic, the Welsh, and the Manx dictionaries at Dr Williams' library in Gordon Square, and at the library of University College, but there is no such word to be found with the appropriate meaning. In Gaelic there is the word *blat*, meaning a *flower*, but this will not answer our purpose. I went to the British Museum and consulted O'Reilly's Irish Dictionary, and there I found what I wanted. *Bla* means "a town, village,

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place of residence, a green field." *Blar* means "a plain, a field" *Blath* means "a field." The Roman name *Blatum Bolgium* then means "the field or the town of the Bolgae or Belgae." The Roman emperors stationed a legion of their Belgian subjects there, consisting of the tribe of the Tungri and, maybe, other Belgians. The natives called the station the "*blath* or *blat* of the Belgians," and the Romans latinised the word into Blatum Bolgium, or the "Belgian Settlement."

20th April, 1900.

Mr JAMES BARBOUR, V.P., in the Chair.

New Member.—Mr Alexander L. Davidson, Clarencefield.

Donations and Exchanges.—Transactions of the Cardiff Naturalists' Society; Proceedings of the Natural Science Association of Staten Island; Boletin del Instituto Geologics de Mexico, No. 13.

A paper on "The Artists of the Ruthwell Cross" was read by Mr A. L. Davidson.

18th May, 1900.

Mr ROBERT MURRAY, V.P., in the Chair.

New Members.—Miss Cresswell, Nunholm House; Mr James Laidlaw; Mr William Carswell.

Donations and Exchanges.—The Transactions of the Marlborough Natural History Society; Bennett's Contributions towards a Flora of Caithness.—III.

COMMUNICATIONS.

The Vegetable Enemies of Mankind.

By Professor SCOTT-ELLIOT.

Dr Johnson defines an enemy as "a person who regards you with malevolence," and Daniel Webster as "a person actuated by unfriendly feelings, one who hates, wishes injury, or attempts to do injury." It is not in this sense that any plant can be said to be an enemy to mankind; but only in the sense that for the sake of its own protection or benefit in one way or another, it is

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endowed with qualities which may be productive of injury to man or to other creatures that are useful to him.

The first example given by Professor Elliot is that of a fungus which infests the corn plant, living inside the leaf and stem, and with its delicate food-sucking threads bores among the live cells and absorbs food from them. This is said at times to have done immense damage to the corn fields of America and also in Cape Colony. When it is considered how large a part of the food supply which this country needs comes from America, it will be seen how much injury may be done to ourselves as well as to the States by crop failures occasioned by the prevalence of this destructive fungus and other plant diseases. The entire loss in that country from these causes has been estimated at 150,000,000 dollars annually. Then we have a large class of plants which are poisonous. The oleander, a lovely garden shrub, is one of these. All parts of it are poisonous. The cyclamen, one of the most beautiful of flowers, is another. The corms or fleshy bodies at the foot of the stem are of poisonous quality, although it is said when cooked they are no longer hurtful. The poor man's weather-glass, so called from its closing its petals in damp or wet weather, which produces bright-crimson or dark-blue specks of flowers in the stubble, is another example. The arum-maculatum, or wake-robin, is also poisonous—supposed to be so for its protection from pigs and wild boars, which are given to grubbing up and eating the underground creeping stem. The upas tree of Java (Antiaris toxicaria) was at one time the subject of much exaggeration by a Dutch surgeon, who described it as fatal to other plants or animals and birds in its neighbourhood or coming near it, but which, nevertheless, has a poisonous property residing in its bark which produces frightful irritation, and the juice of which is used as one of the ingredients of poisoned arrows. Other well-known poisonous plants are scabiosa succisa, or Devil's bit, which produces violent inflammation of the mouth and tongue; digitalis purpurea, or foxglove; aconite, strychnine, strophanthus seeds, Calabar bean, and Muavi bark. At the same time it is well known that some of our most valuable medicines are derived from these poisonous plants when administered in minute doses. The fungus which causes dry-rot in houses or ships, and sometimes works havoc in woods by attacking live timber trees, is a very destructive agent; but it has important uses also in its proper place, its design being to break up dead

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logs and turn them into soil, which it accomplishes by boring into the wood, and so disorganising it that it becomes soft and powdery and falls rapidly into earth. Another and very large and important class of plants, which may in some sense be described as enemies of mankind, is the class of weeds, the number and adaptability and hardness of which, in the midst of all attempts to keep them down, is proverbial. The original curse upon man after the fall was—"Cursed is the ground for thy sake. Thorns also and thistles shall it bring forth unto thee." Some of them, like coltsfoot and bishopsweed, fight underground. The long, deep-buried roots and stems spread below the surface and steal a march upon their neighbours, and often go so deep as to be beyond the reach of the gardener's spade. In old days in Scotland the guil or gul (chrysanthemum segetum) used to be one of the most troublesome pests, so much so as to be made the subject of legislation—"Gift thy fermer put any guile into the land pertaining to the King or to ane Baron, and will not clenze the land, he sould be punished as a traitor, quha leads and convoys ane host of enemies."—Stat. Alex. II., c. 18 (Jamieson's Dictionary). It was said that this weed used to cover five times as much space as the corn in a cornfield. Unlike the weeds which spread beneath the surface, and have roots which send out fresh stems, the couch grass throws out long overground runners, which send out fresh roots and thus multiply the plant. These are more easily removed by the harrow or rake, or killed by ploughing deep into the soil. But the plant is by no means useless, affording, as it does, nourishing food to cattle.

There is another class of weeds, the seeds of which are endowed with properties which enable them to spread over a wide area, and to multiply their kind by taking root in places at a distance from the original plant which gave birth to them. Of this kind are those with delicate hairs or feathery projectors attached to them which are caught by the wind and sent flying away in different directions. The humble weeds of America are specimens of this kind, and among ourselves the dandelion and the thistle are familiar examples. Provision is thus made for bare spaces of ground, which man has left uncultivated, being speedily clothed with an abundant vegetation.

There are certain grasses which approach nearer to one's idea of a vegetable enemy than anything else. The

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fruit ends in a long tail, which has the property of curling itself up when the air changes from moist to dry. The point of the fruit is hard and sharp, and when it falls or is blown upon a sheep's back the tail catches in the hairs of the wool, and by the corkscrew twisting which takes place the sharp point is forced into the skin of the sheep, and sets up inflammation, which often kills the animal. Examples of this kind are Stipa capillata, which is common in Russia. A North American species is Stipa spartea. Another is Aristida Hygrometrica in Queensland, and Heteropogon contortus in New Caledonia. The Harpagophyton or Harpy plant of South Africa is almost as bad, but with this difference, that its spiney fruits get into the mouths of grazing cattle and produce laceration, or into the hoofs of the puny buck or the antelope with a similar result. Other plants become a nuisance to mankind on account of their taking to the water and interfering with his navigation. Of these the Sudd of the Upper Nile is the best known. It is not one plant, but a malled and felled mass of many species, of which the Papyrus, Pistia, Stratiotes, &c., form a part. Steamers have their wheels choked, and even large and powerful ones are sometimes caught and kept helpless among the weeds. Another numerous class of plants which may be termed vegetable enemies are those which are possessed of stinging properties. The most familiar example of this kind is the common nettle (Urtica dirica), everywhere abundant, but particularly near human habitations, or on waste ground of their former sites. The stinging apparatus is a hair with a sharp point, which breaks off and pours the venom, purmic acid, into the skin. Notwithstanding this peculiarity it is a useful plant. Young tops of it are good as a vegetable for making soup. Pigs and fowls are fed on it. The seed yields a species of oil, and the whole plant is said to be a stimulant in paralysis. There are other species of the same genus, the stem of which is more severe than that of the common nettle. One of these is Urtica stimulans-Java, the smart of which lasts 24 hours, and even produces fever. Still worse is "Urtica Urentissima"—the Devil's leaf—of which the pain lasts 12 months, and sometimes proves fatal. A very lovely tree in Australia—"Laportea Miroidies"—has large and beautiful dark green leaves, twelve to fifteen inches long, which sting so severely as to be dangerous to horses. It is said that even the common fig leaf produces irritation. Probably the worst enemies of all to mankind are

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certain associations of plants which cover vast stretches of ground, and are of no obvious use to anyone. No part of the world is free from enemies of the kind. Here we have the peat bog, Sphagnum. Another is the prickly pear in South Africa. In Queensland there are vast areas covered by the Brigalow Scrub, Acacia Narpaphylla. Even worse is the Spinifex—so-called—not the botanists' true Spinifex, which is a harmless and useful grass, used to bind and fix the drifting sand, but Triodia pungens et irritans. The stiff, hard, and spiny leaves make tracts of the country almost impassable, and indirectly have caused the death of many explorers. Another similar grass—Fertuca Alpestris—is a pest in the Southern Alps. In the first stages of man's progress the forest and swamp were his deadly enemies. Even now there are enormous areas of the world forest clad, especially in Africa. Our own country was once to a large extent in the same condition, but the remains of the Caledonian forest are too much altered by the progress of agriculture and the continual cutting down for firewood, and other useful purposes, to enable us to form any accurate idea of what the forest meant to our ancestors. Hence it is obvious that as man develops and multiplies, the forest or most of it, at least, must fall, just as it has fallen in Britain. Yet here we again come to the curious blend of good and evil. Without forest on the hills to hold, suck up, and restrain the rainfall, we should have on all the low grounds periods of destructive floods, varied by other periods of still more destructive drought, and for us who live in towns the glimpses of the woodland and wild nature are an absolute necessity. Morally and spiritually, as well as physically, it is necessary to go occasionally to the desert to recognise on what our life depends, to see the beauty which is so infinitely more satisfying than the strong structures of cities, and to sympathise with our relations beyond the seas.

A paper by Dr Chinnock on an "Origin of the Runic Alphabet" was read.

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FIELD MEETINGS.

The first field meeting for the season took place on the 9th of June. The programme for the day was a drive from Castle-Douglas, embracing Threave Castle, the reputed site of an old Abbey near Glenlochar, Balmaghie Church, and Croft moat, but the state of the weather seriously curtailed it. The Dumfries party reached Castle-Douglas in a downpour of rain, where they were joined by Dr Reid, of Balmaghie, and Mr Imrie, architect, and drove at once to Abbeyyard, reputed to be the site of an old Abbey, and marked as such on an old Ordnance Survey map. No trace, however, now remains of such a building, if one ever existed. Crossing the Dee at Glenlochar Bridge, the party next proceeded to Balmaghie, where they inspected the church and churchyard, the former of which dates from 1794, and has recently been improved and enlarged, having a handsome pulpit of carved oak, and behind it a Rood screen of similar character, the gift of Mr Graham Hutchison of Balmaghie, who also presented two stained-glass windows flanking the pulpit; while at the opposite end is another beautiful three-light window, the gift of a brother. The church contains mural tablets commemorative of former ministers, the most noted of whom was the Rev. John M'Millan, founder of the modern Cameronian Church, whose incumbency of Balmaghie extended over 26 years, in the beginning of last century, during all but the first three of which he was maintained in the benefice by the parishioners in the face of a sentence of deposition by the Presbytery. The only remarkable thing about the churchyard is that it contains the tombs of three martyrs who suffered in the times of the persecution. The party were afterwards hospitably entertained in

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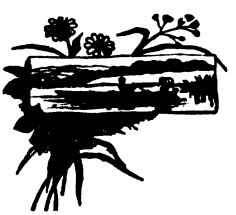
the manse, and drove back to Castle-Douglas, constrained by the unfavourable weather conditions to forego the remainder of the projected round.

The only other field meeting held during the summer took place on the 30th June, when the Lochrutton Loch was visited. The primary object of this excursion was to make an examination of the crannog in the loch, and with this in view the party was accompanied by Dr Munro, of Edinburgh, the distinguished authority on lake dwellings, and the author of several works on this and other subjects of antiquarian interest. The crannog is on an artificial island near the west shore of the loch, now almost completely overgrown with vegetation and trees. Unfortunately, the water was too high to permit of proper investigation, but sufficient evidence was found of the fact that the island was the site of an ancient lake dwelling. After slight digging, a stone hammer-head and several pieces of glazed pottery were unearthed, while by a preliminary investigation in more favourable circumstances, conducted by Mr Barbour, architect, the crossing of two of the black oak beams composing the structure had been uncovered, and a hearth with charcoal and brushwood exposed. It was accordingly resolved to have a more thorough investigation at some subsequent period when, by the lowering of the water in the loch, the conditions were more favourable.



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Account of the Excavations at Birrenswark, and description of the Plans and Sections.

By JAMES BARBOUR, Architect, F.S.A. Scot. (Plates III.-VIII.)

[Extracted by permission from The Proceedings of the Society of Antiquaries of Scotland, Vol. XXXIII.]

Birrenswark Hill, in the parish of Hoddom, lies three miles north of the Roman station of Birrens, and ten as the crow flies from end of Hadrian's Wall, at Bowness, in Cumberland. Its base is about 700 feet above sea level, and the summit rises to an altitude of about 920 feet, the highest point reaching 939 (Plate IV.). The hill is isolated, its sides are steep and at places precipitous, and the summit is a nearly level plateau. Owing to the peculiarity of configuration and commanding position, it forms a conspicuous and remarkable feature of the landscape; and the summit affords extensive prospects of the country in all directions, the English hills, the Solway, Bowness, and Birrens being within view and a number of Scottish counties overlooked.

At a place like this it is not surprising that evidences should be found of military occupation; and the remains of artificial works of this description, grouped about the hill, are not less unique than the hill itself.

The remains, as will be seen by referring to the accompanying plan (Plate III.), consist of a number of works lying round the base of the hill, and of others on the hilltop. Of the first are a large camp of rectangular type on the south side of the hill; another of similar character, but smaller, on the north side; remains of an entrenched roadway, AB, at the east end, for communication between these; a small fort, C, at the west end of the hill; and an enclosure, D, at the east end; also the minor adjuncts, E and F, on the plan.

The south camp contains a small rectangular redoubt, G, at the north-east corner, and a circular work, H, at the west end.

A circumvallation likewise extended apparently round the base of the hill on the east and south, one end joining the north camp, and the other the west fort. It is yet continuous from the north camp to the east enclosure; between the east enclosure and the south camp, where the site is partly under cultivation, only a fragment, K, is left; west of the south camp the line is again traceable some way, L, and at its junction with the west fort. These, together with the north and south camps, would

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embrace two-thirds of the circuit of the hill. Over the remaining one-third there is no trace of entrenchment, and such would hardly be required. The hill there is skirted by land still marshy, although elaborately drained, which would, there is little doubt, be impassable formerly, and the ascent which starts out of it is steep and difficult to climb. In this way the marsh and artificial works together would entirely circumvallate the hill.

In the middle of these works rises the elliptical truncated cone of the hill, the top of which is a large fort, shaped after the outline of the plateau. The west end of the fort is cut off by a transverse rampart so as to form a pear-shaped enclosure, M, within which, towards the west, is a small fortlet, N.

It is a circumstance to be noted that the three larger works are each environed with fortifications provided with gateways on the several sides, and are independently complete and defensible.

With the view of throwing light on vestiges so extensive and apparently important, the Council of the Society of Antiquaries resolved to institute exploratory excavations, and accordingly operations were begun on 20th June last. Three workmen were employed, and sometimes four, under the superintendence of Mr Alexander Mackie, as Clerk of Works; and after three months' labour the investigation had been carried through and was brought to a close.

Obviously, in this case, the excavations must bear an exceedingly small proportion compared with the extent of the surfaces presented for examination. The south camp covers over 13 acres; the area of the north camp is nearly 8 acres; the hilltop fort measures 17 acres; and the total area within the circumvallation would extend to not less than 100 acres. The ground actually turned over in the course of carrying out the exploratory operations, on the other hand, little exceeds an acre in extent. One inference to be drawn is, that the seemingly rather sparse collection of relics recovered must be multiplied many times to represent the volume of objects probably scattered over the unopened ground.

The excavations were directed chiefly to testing the accuracy of General Roy's plan and of the Ordnance map; ascertaining the character and structure of the ditches, ramparts, and gateways; and examining the interior areas for vestiges of work, and for evidences of occupation. The relation the several works bear one to another was also kept in view.

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The following operations were conducted:—Sections were made through the entrenchments at a number of places; several of the gateways were excavated, and trenches were cut longitudinally and across the interiors of the enclosures. The interior of the redoubt in the north-east corner of the south camp was wholly uncovered of earth, and in the centre of the camp a considerable extent of ground was opened in making search for a prætorium.

In proceeding to examine the several works in detail, according to the evidence afforded by the exploratory excavations, the nature of the site may be first alluded to. According to the Ordnance Geological Map the rock formation at the base and sides of the hill is Old Red Sandstone, and at the plateau top it is porphyrite. While at the hilltop the rock is harder, it also lies for the most part at the surface or nearly so, and the depth of soil increases gradually lower down. It is suggested that the formation described and other conditions to be noticed in due course may have imposed some of the irregularities of the plan, and variations in the design of entrenchment, which the encampments exhibit; and the constructive methods discovered, wherein stone is largely applied, were probably influenced through the abundance of such material to be readily got by quarrying on the spot.

THE SOUTH CAMP.

This camp, apparently the most important of those at the foot of the hill, lies at its south base. Its surface is slightly undulatory, and steeper at some places towards the north, and according to section X.Y. (Plate IV.) the altitude rises about 70 feet between one side and the other.

The Ground Plan (Plate III.).—The outline of the ground plan may be described as a distorted rectangle, having the sides approximately rectilinear. Some of the divergences from geometrical form of outline exhibited seem, as before suggested, to have resulted from practical considerations, as, for instance, at the south and east sides, where the rampart follows an abrupt elevation of the ground. The south line is straight but for a slight deflection northwards at the west end, and the east side runs in an even course up to its junction with the redoubt; the angle, however, at the south-east corner of the camp is acute. The north boundary, so far as the line lies between the two out-

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most gateways, is also straight, but beyond these points it deflects southwards, slightly to the west, and markedly towards the east. The west defence is pushed forward at the centre, forming a knee, from which on either sids it runs in a straight line to join the north-west and south-west corners of the camp respectively; and the deflection is just sufficient to admit the small circular work, H, within the camp without impinging on the rectangle of the area, as it might be defined by a straight line drawn from the extremities at the rear of the rampart. That this is not accidental is further evidenced by the way in which the circular work fits in with the side of the street and with the rampart, which shows a perceptible shoulder concentric with its circumference. All the corners of the camp are rounded.

The dimensions over all, including the redoubt, are:—On the south, 900 feet; on the north, 850 feet; on the east, 600 feet; and on the west, 700 feet; average length, taking into account the forward bend at the west, 900 feet; and width, 670 feet. The interior length extends approximately to 840 feet, and the width to 580 feet.

Three entrances give access to the camp from the north, the centre one being about 50 feet wide, the others 35 feet. Each is guarded by a quasi-circular mound or tower, about 60 feet in diameter at the base. These mounds are known locally as "The Three Brethren." The interspaces, it should be noticed, are equal, evidencing that the work was not set out without line and measure. Central gateways occur also at the south, the east, and the west, each guarded by a traverse, but of oval form.

The redoubt, G (see fig. 8), is rectangular, with rounded corners; and an unprotected gateway at the south gives entrance to it from within the camp. The interior dimensions are:—from north to south about 100 feet, and 70 feet from east to west. The work shows a want of aligment with the camp, which, together with other indications of severance, suggests a possible difference of epoch in relation to the main work.

Within the redoubt again is a small square enclosure, lying diagonally in the centre. It measures about 30 feet each way, and the likelihood seems to be that it was superimposed on the original work at a subsequent period. Unlike the redoubt itself and the camp, it is disposed with true orientation.

The small circular work, H, at the west end of the camp

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measures 80 feet in diameter, and shows an entrance about 10 feet wide towards the south.

The streets do not remain so definitely marked, except at the gateways, as to allow of the lines being traced with certainty on the plan. Doubtless they would traverse the camp from east to west and from north to south, in connection with the entrances, and there might be others.

It now only remains in connection with the plan to notice the water supply. The supply is derived from a fine spring known as "Agricola's Well," which rises about midway between the east and the west, and towards the north side of the camp. As a rill it flows in a small and slightly wimpling ravine southwards, and escapes through the south rampart at a point a few feet west of the south gate. Before reaching the rampart, however, it passes through a circular basin of some size, artificially made.

The Defences.—The enceinte of the camp is of the common single ditch and rampart type. The ditch is V-shaped, with steep scarp and counterscarp, and at the north side of the camp, where the earth is of less depth, it dips at the bottom into the rock, or debris of rock, 2 feet or more (Plate V. fig. 1).

The rampart is earth-built and in layers. At the base is a bed of finer earth, about 9 inches thick, probably the original soil on the site with that from the area of the ditch added; over this a bed of clay, 1½ to 3½ inches thick, occurs, and above the clay the mound is carried up and brought to its full height with earth and debris, which increases in roundness of grain as it nears the crown, as if applied in the order it was cast from the ditch. Remains, but scanty, of brushwood bonding occur in the earth composing the rampart, and at two places charcoal was found at the base in some quantity.

Probably, as already suggested, the abundance of stone obtainable on the spot may have induced the builders to adopt methods not previously met with in the Society's excavations of insuring for their work the qualities of strength and endurance. Thus the front of the rampart, from the natural ground surface, or lower, upwards to the crest, was found to be faced with a pitching of stone (Plate V. fig. 1); and the ditch, at the north side of the camp at least, is also lipped with stones, and partially so faced on the counterscarp. The pitching of the rampart varies in the quality of material and workmanship, as if skilled and less

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skilled workmen were employed, and it is also more disturbed at some places than others. Where in best form and most perfect, the stones, which are flattish and unshaped, do not lie level on the bed, but slope, so that the lower edge of one overlaps the upper edge of another somewhat after the manner of slates on a roof.

At the rear of the rampart, where the ground was opened, a pavement, about 5 feet wide, was usually found, but at one point kerbing takes its place. Generally the pavement is of heavy material and good workmanship, but, as in the case of the pitching, the quality varies.

Allowing for diversities of the kind alluded to, these ramparts exhibit, so far as opened, uniformity of structural detail. The turf was removed at one or more places on each of the several sides of the camp, and in every case stone pitching was disclosed. The sections cut in the rampart at the north side, and a partial cutting at the south, showed lamination similar in each case, but it was not observed at the west side.

In addition to the stone-work before described, a piece of an exceptional kind occurs. Four feet below the crest of the rampart, at the north side of the camp, there is a single stone, measuring 4½ feet by 2½ feet and 5 inches thick, as from the quarry, lying flat (Plate V. fig. 1). It is pierced with six holes under an inch in diameter, and running in a long slanting direction, in which were pieces of charcoal. The holes are apparently natural.

The fortifications of the redoubt at the north-east corner of the camp are of a different type, and consist of a ditch and double rampart (figs. 2, 3, 4), half the earth got from the ditch having been cast inwards and the other half outwards. There is a structural difference also, in so far as the stone pitching is absent. On the other hand, remains of lamination and brushwood, as previously described, are disclosed in both the front and rear ramparts.

Under the inner rampart of the redoubt, at the north (Plate V. fig. 4), is a layer of stones corresponding with those discovered in similar positions at Birrens and Ardoch. It measures 8 feet in breadth in the direction of crossing the rampart, but how far it extends lengthwise was not ascertained. It is of excellent workmanship, and remains in perfect order. The stones are well fitted, and bedded and cemented together with worked clay.

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There is also a layer of very thin stones at the base of the outer rampart, which is not indicated on the drawings.

The counterscarp of the ditch between the ramparts at the same point shows a kerbing at the lip of stones two courses high, and lower down there are three courses, the faces of which are splayed to suit the slope. The stones are bedded and jointed with clay.

The most important piece of masonry, however, in this connection consists of two parallel walls crossing the centre of the north rampart of the redoubt (Plate VI. fig. 5). The walls flank a passage, 4 feet 8 inches wide, which is floored with a hard substance, like concrete. Each wall is 3 feet in thickness, and the remains rise at the highest point to 3 feet and extend 24 feet in length. The length northwards is complete, but at the south, where there is a collection of stone debris, the ends are broken off and imperfect. The walls are fairly built, and towards the passage the faces are finished with greater care. The position this structure occupies in the rampart and its passage-like form seem to mark it as a gateway originally, closed by subsequent alterations.

In regard to the dimensions of the fortifications described, those of the camp are larger at the north than elsewhere, partly resulting from the rearward fall of the site, but doubtless also of design, in order to equalise and adapt the defences in view of the opposing higher ground. The width on that side varies from 42 to 58 feet over all, but on the other sides, where the rampart is reared on a natural bank or on rising ground, it is contracted to from 30 to 35 feet. The double rampart of the redoubt and the intervening ditch together measure 48 feet across.

The ditch of the redoubt is much silted up, but the ramparts do not seem to be materially disturbed. The camp ditch is correspondingly silted, but the rampart, although disturbed more or less, continues for the most part in comparatively good form, and at the section (Plate V. fig. 1) it is apparently perfect, or nearly so, as the stone pitching of the face remains in order up to the crown.

The Gateways.—The east gateway of the camp was first examined, and the work consisted in excavating the traverse ditch and clearing away the earth from the rearward area. As disclosed, the entrance measures about 40 feet in width, and the roadway passing into the interior without depression at the

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ditch or rise at the rampart, has been surfaced with pavement of heavy stones (Plate VI. fig. 6), of which about one-half remain on the ground, but in a disturbed state. The oval traverse, measuring about 50 feet in length and rising 9 feet above the bottom of the ditch and 3 feet above the paved roadway, remains apparently of the height it was originally. It is pitched all round, like the front of the rampart of the camp, with flat stones; and the well-formed V-shaped ditch fronting and flanking the traverse, 7 feet in depth below the ground surface outside, is also partially faced in the same way.

The gateways at the west end and the south side of the camp are of similar design, and the partial clearing of the earth from the west one disclosed a roadway surfaced with pavement.

The three gateways of the north side of the camp, as previously stated, differ from those just described in so far as the protecting mounds are circular and of larger dimensions, being so designed, it is presumed, in order to adapt them to the particular circumstances of the situation.

With a view to investigate the centre one, the roadway and half the traverse ditch were cleared, and a section was carried from the south side half-way through the mound (Plate VI. fig. 7). The roadway, like those at the east and west, had been surfaced with pavement, of which, however, only a fragment remains. The traverse, or tower, which is built over a rough pavement, exhibits nothing special in the disposition of the earth composing it, but, like the oval traverses, it is stone pitched all round, and seems to be of the full original height. The ditch, which dips 2 feet into the rock, is also partially stone-faced. The mound rises 12 feet above the surface of the gateway, 10½ above the bottom of the traverse ditch, and about 2 above the surface at the outside of the ditch.

Of the two others, the east one was excavated, and discovered to be similar to that just described, and the one on the west, so far as appears, also corresponds.

The Interior of the Camp, as disclosed by the excavations, appears to have been widely surfaced with pavements. The pieces, however, are in such a disturbed and imperfect state as to preclude inference regarding their purpose or meaning. Remains of stone-work exist also all along the margins of the rivulet; the circular basin near the south of the camp, through which the water flows, is stone-faced in thin receding courses,

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and there are stone remains adjacent to where the rivulet passes through the rampart. But the most important vestiges of this description were discovered in the centre of the camp, and consist of walling, pavement, and debris, evidently of large and important buildings, &c. (S). The traces were followed 180 feet in length from north to south, but both ends were broken off, and no idea of what the full length or the width might be could be obtained. A part of the front wall, which is sufficiently well defined, measures 2½ feet in thickness, and 30 feet backwards is another marking of a wall of similar thickness. The remains lie on the east side of the main cross street, and 30 feet back from its centre; they block the main longitudinal street, and while not parallel with the former, the front lies at right angles with the latter. The position is very similar to that of the Prætorium at Birrens.

At the centre of the main cross street, and opposite the south end of the remains just described, there is a small fragment of stone-work (T) disposed as a segment of a circle, and measuring about 12 inches in thickness. It is mentioned in relation to another fragment of similar form in the redoubt to be presently noticed.

The interior of the redoubt (fig. 8) showed patches of pavement and a good deal of stone debris, as if the whole area had been so floored; possibly other purposes also may have been served. Two drains disclosed should be noticed as resembling in construction one found within the hill-fort. One starts at the north of the area and runs eastward a short way, and then southwards at the rear of the east rampart; and the other, starting at the same point, with a space of 18 inches of uncut earth between them, runs north-west, and falls into the ditch between the ramparts. The depth is about 4 feet, and the trench is filled with angular quarried stones of good size tumbled in. Towards the west of the area there is a group of four post-holes and the piece of stone-work of segmental form before alluded to, and at the north-east corner is another group of three post-holes. The holes are not sufficiently numerous to define the form of enclosure the posts may have served to support; but so far as they lend themselves in that direction, a circular plan 17 feet in diameter would best fit in with their disposition. The circumference of such a circle applied to the first group would describe the outer curve of the segment of stone-work, pass through three

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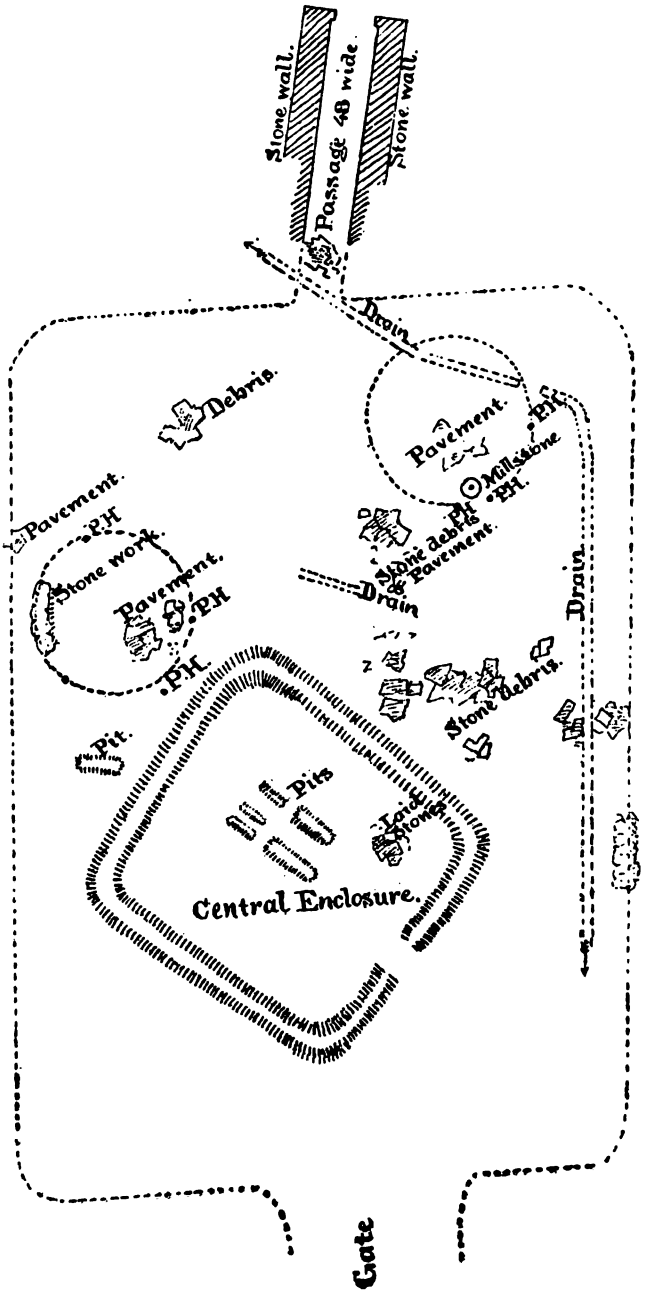

Figure 8—Interior of Redoubt.

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of the holes, and leave the fourth outside at a distance of 1 foot, and applied to the last group the circle would pass through all the three post-holes. Within the area of the latter circle a granite under-millstone lies, apparently *in situ*, and near it are fragments as of the upper stone.

It remains in connection with the redoubt to notice a group of small pits, six in number; five are within the central enclosure, and one is outside. Of those within, two lie side by side with an interspace of 2 feet, and measure 5 feet 6 inches by 2 feet 3 inches, and 7 feet by 2 feet 3 inches respectively; the remaining three, which measure about 3 feet 6 inches by 1 foot 6 inches, lie immediately west of the two first, and are all disposed lengthwise, due east and west. The one outside the enclosure is similar to the two first described, but shows a little departure from the orientation. The pits, which are about 3 feet 6 inches deep, were filled with soft sandy earth sufficiently distinct from the surrounding till, and in one was a quantity of quarried stones.

The small circular enclosure (H) within the west end of the camp, when examined by cross-trenches, showed a hollowed and saucer-like interior, the deepest part of which reached the rock and appeared slightly sunk into it. A small mound of earth, dressed roughly on the face and rear with stones, surrounds the hollow, rising a little above the outside surface mostly, but at the north it is sunk so that the top falls below the level of the camp floor.

In closing the description of this camp, one or two of the more outstanding characteristics it exhibits may be recalled. In tracing out the ground plan, it seems to have been the design of the builders to utilise whatever advantages the site might afford with a view to securing the greatest strength at the least expenditure of labour, although involving some irregularity of outline. The defences, also, are varied in form and dimensions, and otherwise adjusted according to the particular circumstances obtaining at the several parts of the camp. At the north, where the opposing ground is high, they are larger than elsewhere, and the gate defences appear to be designed specially to meet the requirements of the situation. It is a characteristic that both scarp and counterscarp are very steep; and in order apparently to sustain the built-up earth in such form, a pitching of stones is

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applied to the former, and partially, to the extent presumably found requisite, to the latter also.

The entrances are skilfully designed, so that approach to the interior can be had only through narrow openings on either side, flanked right and left by the rampart and the traverse; and the traverses, while rising but little above the opposing ground, together with the formidable ditches, seem effective barriers.

In regard to the degree of permanency characterising the camp, it has hitherto been classed as a temporary one. The structural details of the fortifications, as before described, do not, however, afford any support for this, but for the contrary view, and the large central buildings and extensive heavy pavements of the interior evidence intended occupation more or less prolonged.

Coming to the evidence of occupation, which is not plentiful, regard must be had to the very small proportion of the area examined, and to the probable disappearance of much in former times. At a point in the interior, opposite the buildings and on the other side of the rivulet, the earth showed abundant traces of charcoal, and more limited traces of it were met with at several other places. A millstone has already been mentioned as lying in the redoubt, where several small fragments of grey pottery, the bottom of a bronze vessel, a whetstone, a piece of slag, and a considerable quantity of iron in shapeless pieces, one of them attached to remains of an oak plant, were also recovered, as were likewise two stone balls, one of them in the east trench, and several leaden sling-bolts. Within the camp were recovered a number of these sling-bolts, ten in one group, others singly, one from the counterscarp of the north ditch, a number of stone balls, singly, an iron spear-head and fragments of another weapon, an iron axe-head and part of another, quantities of shapeless iron, slag, a bronze ring, half of a small stone disc, a bead, a worked flint flake, and a fragment of red pottery, horseshoe of iron, several whetstones, leaden whorl, and two fragments of glass or paste, probably bracelets. The relics will be more particularly described by Dr Anderson.

There has doubtless been occupation, but any idea of the probable duration cannot be inferred. The impression formed on the evidence revealed by the excavations is that a period which might be described as temporary would hardly satisfy the conditions; and there does not, on the other hand, seem to be any

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reason requiring the conclusion that the occupation was not of extended duration.

THE NORTH CAMP.

This camp, which lies at the north base of the hill, opposite and out of view of the south one, is partially destroyed, the entrenchments on the north and west sides being almost obliterated. On the south and east, however, they remain in good form, and short returns at the north and west serve to define the lengths of the sides With the aid of these returns and the marks of the destroyed works remaining, the plan of the camp has been followed (Plate III.). While fairly rectangular, it presents several peculiarities. The line of the north side, starting from the north-east corner, runs westwards nearly half-way, where there is a southward set-off, diminishing the width of the westward area, and giving the appearance of two camps of ordinary proportions but different widths conjoined. The south side also shows a curious inward bend in connection with the west gateway there, which is also peculiar. From the southwest corner the line runs straight but with an inward slant until it reaches the gate, on the opposite side of which there is a corresponding slant, so that the gate recedes rearward, and the divergence is just sufficient to provide for the projection of the traverse, which in this instance is attached to the rampart.

The site has a slight inclination northwards, and part of the north side follows a natural bank, on which the rampart has been built.

The dimensions over all are: length, 1000 feet; width of east portion, 400 feet; and of west part, 300 feet.

There are six gateways, one at the east and west respectively, and two at each side.

The entrenchments unaccountably differ in type, for whereas the single ditch and rampart prevails on the south, east, and west sides, the double rampart with intervening ditch is found on the north.

Generally the works exhibit constructive methods similar to those described as prevailing at the south camp, but they are not always well marked. The layers of finer earth and clay found in the base of the rampart of the south camp were here well marked in one section (Plate VI. fig. 9). The stone pitching of the front, however, is not generally well defined, which may be accounted

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for by the circumstance that a great part of the ditch is cut in hard splintry rock, which seems to have been applied partially as a substitute. One section was exceptional (Plate VI. fig. 10). At the rear of the ditch is a narrow berm, and a perpendicular facing of well-built stone-work about 18 inches high, behind which is the earthen rampart.

The rampart of the north side where it is double (Plate V. fig. 11), like that of corresponding form at the redoubt of the south camp, gives no indication of stone pitching on the front.

A pavement similar to that disclosed at the rear of the rampart in the south camp was found here also.

The gateways are all sufficiently distinct, but in the case of the west one on the north side no mark of the traverse remains.

As already stated, the west gateway (Plate III.) on the south side is peculiar. The rampart is pushed rearwards upon the camp, so that the gate stands at the apex of a broad but shallow triangular recess, and the traverse, instead of being as usual a separate mound with a passage on either side, is formed by turning the end of the rampart on the east side of the gate southwards, and swelling it into a beak-like shape with an elevated centre. There is an entrance on the west side of the traverse only. The gateway had a surfacing of gravel over a heavy stone pavement, partly wanting, below which was another pavement of stone-work of some kind. The lower part of the traverse ditch has been quarried out of very hard rock, the northward projection of which may possibly account for the rearward divergence of the entrenchments. Several large detached blocks of stone remain in the ditch.

The other gateways, which appear all to be of one design, have projecting oval traverses similar to those of the east, west, and south gates of the south camp.

In the interior of the camp were discovered at several places pavements, but nothing of definite form.

Apparently, the source of water supply has been a small stream which runs northwards through the camp. It rises under a perpendicular cliff of rock at the north side of the higher part of the hill.

A stone ball and two pieces of iron were recovered at this camp. The excavations in the interior were very limited, and so far little evidence of occupation was discovered.

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The Fort at the west base of the hill (C, Plate III.) is peculiar in regard to shape and some other circumstances. The plan, which is inaccurately represented by Roy, and imperfectly at least on the Ordnance Map, is triangular, the base being at the south and rectilinear, but with a knee towards the west end, while the sides are unequal and show an outward curve. The enclosing defences consist of double ramparts and an intervening ditch (Plate VII. figs. 12 and 13), identical in type with those of the redoubt of the south camp and the north side of the north camp, and corresponding also in structure with the former. The interior area is hollowed out so that the floor in the centre is lower than the ground outside, and at the rear of the rampart it is paved or laid with stones, the work being carried some way up the rampart. An opening through the ramparts, towards the east, shown on Roy's plan as an entrance, was examined, but the result was inconclusive.

At the west corner there is a narrow opening in the inner rampart, giving access from the interior of the fort to the ditch; and by passing through and following the ditch a few feet southwards, an opening is reached on the right hand which leads into a narrow passage running westwards a distance of 20 yards. It is 4 feet wide, and the outer ramparts of the camp are carried along it, one on either side. The floor is laid with stones, one of which showed a small cut-out water channel. This seems to have been the entrance.

The finds recovered here—a broken quern and a piece of bracelet of opaque glass—were of the same character as those found in the other camps.

The Enclosure at the east base of the hill (D, Plate III.) is divided into two compartments, and there is an entrance from the south. The shape is not correctly represented either on Roy's plan or the Ordnance map. The enclosing and dividing mound, composed of a mixture of earth and rock debris dug out of the interior, which, as regards the west division, is hollowed out, measures 12 feet across and 2 feet in height. There is no ditch. The west part exhibits no artificial flooring, but the east division, which is on a higher level, is floored with flat stones of irregular shape, well fitted together. The back of this enclosure rests on a natural bank.

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THE CIRCUMVALLATION.

Between the north-east corner of the north camp and the east enclosure, D, the line as indicated on Roy's plan remains well marked. There is a ditch in front with a rampart in the rear, built on rising ground. At a section made through the rampart (Plate VIII. fig. 14), a small fragment of moulded and colour-decorated glass, being probably part of a bracelet, was recovered in the earth at the base. A little south of the east enclosure another fragment of the work, K, also shown on Roy's plan, is still distinguishable. It stands on a height, and the interspace, which is a hollow, is so commanded by the works on either side as to suggest that it may have served as an entrance to the fort tress. The continuation of the circumvallation L, from the wes- end of the south camp towards the west fort, as indicated by a single line on Roy's plan, is also traceable on the ground. The branch ends of the rampart remain, one joining the south camp and the other the west fort, and perceptible lines indicate its prolongation from the south camp some way westwards. A section showed a slight mound outside the ditch and higher ground inside, as if this part had been of the double rampart and intervening ditch type.

Referring to the small rectangular work of three apartments, E, at the east end of the hill, shown on Roy's plan, these and several other similar works (not marked on the plan) were examined, but without result, and it is impossible to say whether they were part of the military works or not. One lies near the south-west corner of the south camp, a group of three of large size are situated some distance south of the same camp, and one of curious design is placed between the west fort and the "Roman Road."

Outside the south-east corner of the north camp is another small work, F. It is circular and about 45 feet in diameter. The interior has been hollowed out, and the earth and rock-shivers therefrom used in building a small enclosing mound about 12 feet wide and 2 feet high.

Roy's plan shows traces of a work, B, starting from the south-east corner of the north camp and extending southwards along the east end of the hill, and after an interval a fragment of a mound, A. The first is discernible, but with difficulty; the second, which remains in good form, was examined and found to be the protecting rampart on the east side of a road which has

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evidently joined the south and north camps (Plate VIII. fig. 15). The roadway, which is 10 feet wide and surfaced with flat stones laid as pavement, is cut out of the slope of the hillside, and between it and the rampart is a ditch, the only one in connection with the work; a sandstone ball was recovered from the ditch.

An ancient road passes a few yards south of the west fort, running west and north-west, as indicated on the Ordnance Map. It is known as the "Roman Road." Its surface was exposed at six different places, disclosing stone pavement composed of flat laid quarried stones, but the work was more or less disturbed. At one point the trimmed edging remained, of which, however, the stones were not materially larger than those in the body of the work. The best preserved part showed a roadway about 10 feet wide, with a hollowed continuation or water channel along the side next the hill, 2 feet wide. The work is fairly similar to the pavements within the camps and with the piece of roadway at the east end of the hill before described.

Another piece of road, Q, R, also paved and apparently branching from the last, runs in an easterly direction along the north side of the west fort, and touching the end of its narrow entrance. Marks, not very clear for some way, but distinct further on, can be traced of its continuation to the south-west shoulder of the hill, where it passes by a clearly-marked track round to the main gateway on the south side of the hill fort.

Two conclusions may be suggested as following on the circumstances described. The shape of the west fort may be consequent on its position in the angle between the two roads; and its purpose probably was to serve as a guard-room for the entrance to the fortress, which here apparently branched off the "Roman Road."

HILL FORT.

The hill fort (Plate III.) occupies the whole plateau, measuring from east to west about 1700 feet, and from north to south 700 feet at the west part; while the east part, owing to an abrupt contraction near the middle, is reduced to about 400 feet in breadth. At the point where the contraction is, a depression of the surface crosses the plateau, and another slight hollow occurs near the middle of the east part. The outline is sinuous; in particular, a recess marks the north side at the point where the contraction of the width occurs. One not so deep lies opposite

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on the south side, and there are two others on the same side further east, the interspaces being about equal. The sides of the hill are everywhere steep near the top, and at several places the face is perpendicular. A stretch of precipitous rock margin, known as "The Fairy Craig," occurs at the east end of the hill, another at the north side near the point of contraction of width, and at the west end also there is a good deal of rock falling abruptly from the crest. The ascent to the plateau is easiest on the south side.

The Defences.—The plateau is entirely encircled with an artificial rampart, which follows the sinuosities of the crest; and on the south side, where the ascent is not so steep, there is a second line, in front of the first, which also follows the windings of the ground, maintaining, except at the gateway returns, an approximately uniform difference of level, but not an equal distance from the first.

In addition to the encircling ramparts, a mound (O, Plate III.) is built over the crest of the natural bank on the west side of the surface depression before mentioned, dividing off the broader part of the camp at the west end into a separate fort, within which, at the west side, is a small heart-shaped fortlet, N; and at the eastmost recess of the south side, where the slight hollow is, an artificial work, P, crosses the hill in nearly a straight line.

Four gateways afford entrance to the plateau, situated, respectively, one at the west end, one in the recess on the north side, one in the middle recess, and another in the west recess on the south side. The east recess on the south side, although now crossed by the rampart, had probably been a gateway also.

The encircling and outward ramparts do not in this case stand up materially above the surface in the rear (Plate VII. figs. 16, 17), and to the ordinary observer are not very apparent; but the slight elevation, greener tint, and protruding stones sufficiently mark the position. The encircling rampart may be described as a trimming of the crest of the hill, the artificial work being generally 30 feet wide at the base and 4 feet high in the centre, and the scarp dies into the slope of the hillside. There is no ditch, which is the main differentiating feature of the hilltop defences. Possibly this circumstance is consequent on the builders' methods, but more probably it was compelled by the nature of the site, with its steep scarp and rock structure. The most outstanding characteristic these ramparts present is the

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stone pitching of the front. While absent, or partially, at one or two places, it has doubtless been constant, both in the case of the encircling rampart and the outer one on the south side of the hill. The best sections show the work in very complete form, and continuous from the base to the crown. The ramparts here, while not so steep on the front as those of the camps below, equal in this respect the mounds at Birrens. A number of sections made at intervals revealed the inner structure of the mounds. At the east recess of the south side of the hill, the core was found to consist of large stones heaped together. At other two places it was formed of heaps of earth and stone intermixed. These conditions, however, were probably accidents or disturbances, as the other sections all exhibited earth structure; and in one section a peculiar description of bonding occurs, which seems to evidence tenacity on the part of the builders to this mode of treatment, whatever the material at command for the purpose might be. It consists of a row of roundish flat stones, very regularly disposed in a straight line from side to side, and with narrow interspaces, about half-way np the mound (Plate VII. fig. 17).

The mound separating the east and west parts of the plateau is built of earth over a ridge of rock, and shows no intermixture with or covering of stone. It is not more than 2 feet high above the rock.

The gateways are no less interesting than the defences just described. Differing, and necessarily, from those below, they are not less skilfully arranged. Traverses are wanting, but advantage is taken of the recesses in the sides of the hill in which to lay out the approaches so that they are dominated and flanked by the returning ramparts on either side.

Of the west gateway, which is a little recessed, nothing remains but broken pavement. Leading from it is a narrow path, 4 feet wide near the gate, and 21½ feet further away, formed by cutting out the hard rock a depth of 2 feet. It passes west and southwards, round a steep escarpment of rock, on which the enceinte returns.

The north gateway is situated in a deep recess of some width, which is flanked by precipitous ramparted heights on either side. In this case, also, only disturbed pavement marks the structure, and on one side is a fragment of a drain 12 feet in length, with a

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channel 12 inches square, sides of stone, and covers of whinstone averaging 30 inches long, well fitted together.

In the historical part of the paper, Dr Christison shows that a well, situated on the north side of the hill, has been described as having been fortified. A spring rises at the base of the precipitous rock-face, a little way east of the north gate, and a piece of rampart, earth-built and stone-faced as before, remains, leading from the gate in the direction of the spring, which was probably the source from which the supply of water for the fort was obtained, as nothing of the kind has been discovered on the hilltop. The runner passing through the middle of the north camp is fed from the same spring.

Of the two south gateways, the east one (Plate VIII. fig. 18), which stands behind a small gorge, shows an oblong pavement floor, trimmed on the straight edges, and measuring 15½ feet rearwards by 9½ feet across, constructed of flat unhewn stones embedded in clay. At the south end marks of walling 2½ feet thick and a square outline are visible, and seem to indicate that the gateway was a stone-built superstructure. The approach is by a narrow way in the bottom of the gorge, which for a length of 20 yards is covered with large stones, very unevenly disposed, as if either they had been much disturbed, or were so arranged with a view to impede progress towards the gate; and it is defended by the double line of rampart returning on either side, coalescing at the gate, and maintaining a higher level, and so commanding and flanking the approach.

The remaining gateway (Plate VIII. fig. 19), being the west one on the south side, was probably the main entrance. The approach is of greater width than the others, the gradient is easier and more uniform, and the roadway is better formed. The roadway is partly cut in the rock, which is dressed to form the surface, depressions being made up with pavement. It curves from the west, northwards, round the east side of a steep escarpment, on the top of which the outer rampart of the fort returns, flanking the entrance on that side. There being no natural flanking on the other side, the builders have supplied artificial defences, consisting of a double tapering mound, carried alongside the roadway. The gateway stands in line with the encircling rampart of the fort, which in this instance has no returning bend. It shows stone foundations consisting of stumps of flanking walls in front of the gate; a threshold, with a

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scuntion on one side and broken walling on the other, from which the opening would seem to be about 4 feet in width; an interior space measuring 3 feet 6 inches rearwards by 6 feet across, marked with fragments of enclosing walls and paved with flat stones. The remains indicate that this gate also was probably a stone-built structure.

The Interior.—The dividing rampart has already been described and the line of artificial work crossing from south to north near the east end has also been mentioned. The latter shows a rounded surface like a roadway, the crown 9 inches higher than the sides, but of soft earth. Under or alongside is a drain of good depth, constructed similar to those found in the redoubt of the south camp, previously described.

In regard to the small west fortlet (N, Plate III.), when carefully surveyed, the plan is found to be symmetrical, and resembles a horseshoe, pointed at the north, and with a base at the south composed of two straight lines, which retire towards the centre and from a re-entering angle (Plate III). No apparent reason for this peculiar shape has been discovered, and it seems as if it were simply fanciful. The extreme length over all from north to south is about 130 feet, and the greatest width is equal to the length. The enclosing mound, measuring about 12 feet across and 3 feet 6 inches in height, exhibits exceptional modes of construction (Plate VIII. figs. 20, 21). On either side is a face wall about 2 feet in height, and varying from 1 foot to 3 feet 9 inches in thickness, resting on the rock surface. The walls are well built of large quarried stones, disposed in courses of one to three in the height, cleft fair and clean on the face, and roughly squared in the joints. While no tooling appeared on the face, unmistakable marks of the mason's pick were discovered on the bed of a displaced stone. The space between the faced walls is filled, and the mound is carried up to its full height with earth, built in layers in the following order: earth mixed with charcoal or decayed brushwood, 6 inches thick; red soil, 3 inches thick; peat or turf, black and very distinct, 2 inches thick; a mixture like iron rubbish, but probably moor-band, 6 inches thick; and the remainder earth, and the surface turf.

The entrance (Plate VIII. fig. 22), which is on the west side, is much destroyed. Its width is about 4 feet, and several flat stones mark the floor.

Another kind of structure has now to be noticed. It is a

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tumulus 70 feet in diameter (Plate VIII. fig. 23), standing at the highest point of the middle part of the plateau. While the artificial work at the centre is only 5½ feet high, owing to the fall of the ground it stands 10 feet or more above the level of the outer circumference. A section was opened through the cairn from east to west, when it appeared that the cist had been destroyed. One stone, 4 feet long and 2 feet 4 inches high, remained in position, and five others lay at hand which had evidently belonged to it, also some fragments of charred bone. Orientation does not seem to have been observed; the cist lies nearly parallel with the length of the hill. The construction of the tumulus shows the rock surface under it slightly sunk for the reception of the cist; over the cist was a small mound of clay rounded so as to carry off the water, and above the clay rose the wide, flat cairn of stones, disposed as if in layers concentric with the clay core. The pieces which composed the cist, as well as the smaller and more angular stones making up the cairn, correspond with the description of rock on the hillside, whence it is presumed the material was obtained.

At the east end of the plateau the rock surface seems to have been utilised as a floor, the depressions being levelled up by stone pavement. Stone pavements are very extensive, both at the east and the west parts. Some vestiges, but uncertain, as of walling, were also disclosed. These remains, however, furnish no definite information, further than showing how elaborate the preparation of the camp has been.

Charcoal and fragments of charred bone were plentiful, and generally appearances of occupation were much more abundant here than in the lower camps.

Among the relics discovered were a considerable number of leaden sling-bolts, singly and in groups, twenty at one of the south gates, and twelve at the other; one or two stone balls; scraps of iron not plentiful; leaden whorl, similar to one found in the south camp; at the east end, two small transparent glass discs; in the fortlet, a bead similar to one found in the south camp; two fragments of glass bracelets, one in the substance of the enclosing mound of the fortlet; and outside the fortlet, on the rock, and covered by a stone, a small intaglio.

All the details disclosed by the excavations have now been described, and it only remains to say a word regarding General Roy's plan and the Ordnance map, both of which have proved

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very serviceable in connection with the carrying out of the exploratory works. On the former, many vestiges appear, not indicated on the latter, and which are not now readily observable on the ground. The plan is generally, although not strictly, accurate. The only points requiring notice are the gateways at the south side of the south camp. At the centre there is shown on the plan a projecting return of the fortifications, which does not exist, and which evidently has arisen through joining the line of a modern drain with the traverse of the gate. Two small openings like gates, but without traverse, are shown, one on either side of the centre projection, but no opening exists corresponding with the west one; and in regard to the east one, while an opening for drainage exists, no indication of a gateway could be discovered there.

Two points only need to be mentioned in regard to the Ordnance map. There is no tumulus near the small fortlet at the west end of the hilltop as indicated; and the fort at the east end of the hilltop is at least inaccurate, and it is doubtful whether there is any separate fort here at all.

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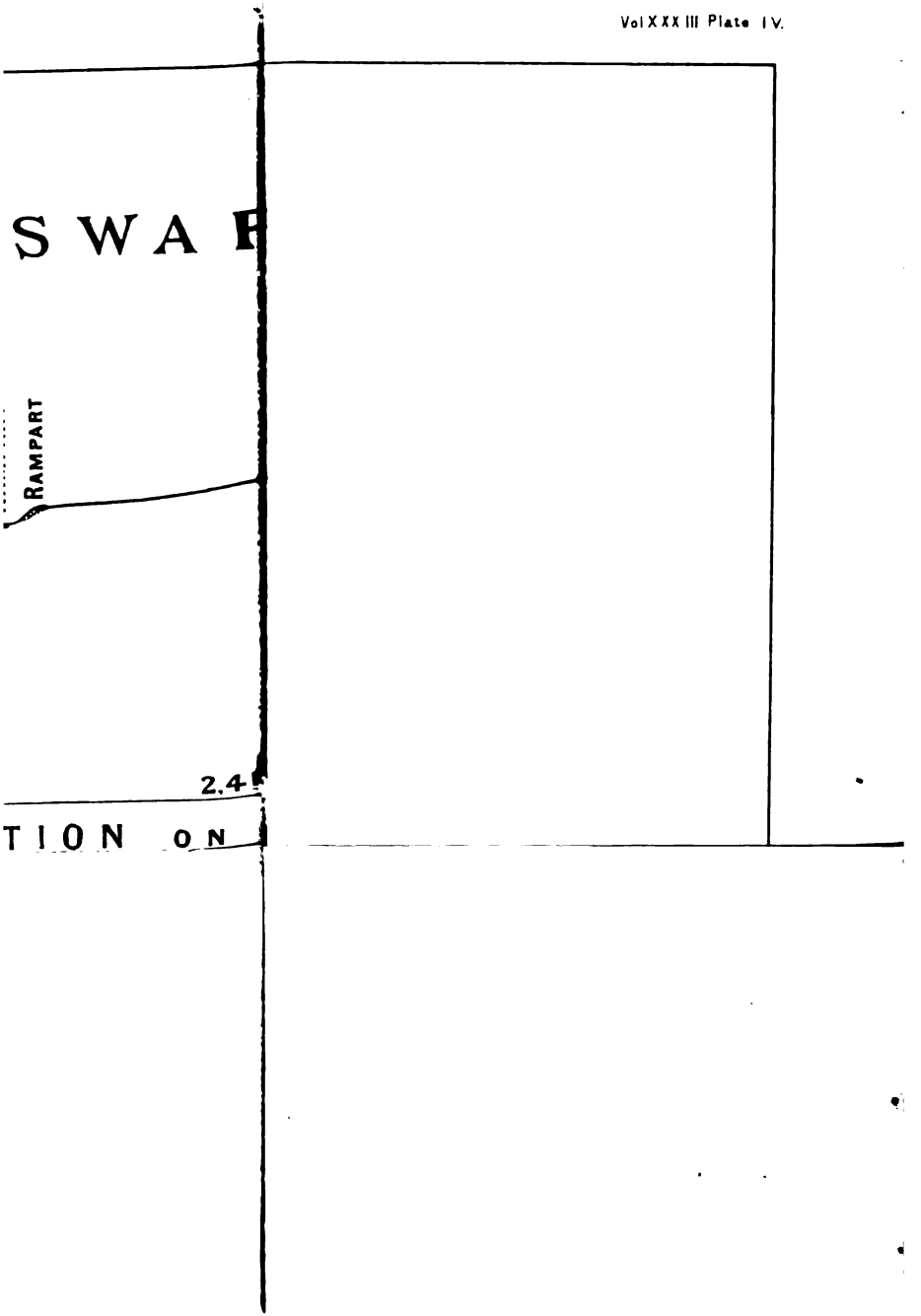

FIG. II. NORTH

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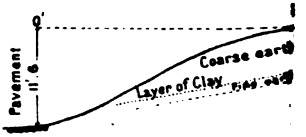

FIG. I. SECTION OF NOR

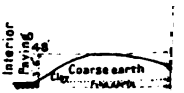

FIG. 2. EAST

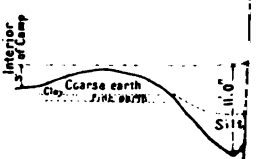

FIG. 3. WEST RAM

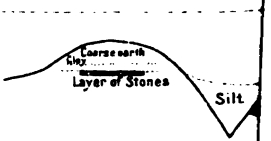

FIG. 4. NORTH RAM

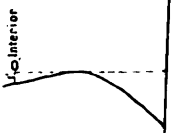

FIG. II. NORTH

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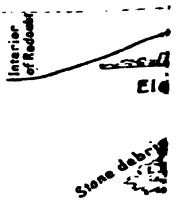

FIG. 5.

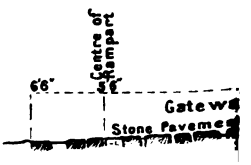

FIG. 6. EA

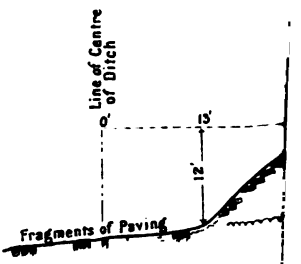

FIG. 7. TOWER OF

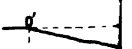

FIG. 9. S

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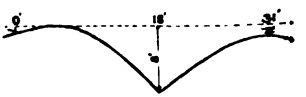

FIG. 12. EAST RAMPART, W

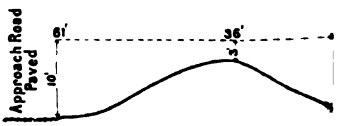

FIG. 13. NORTH RAMP

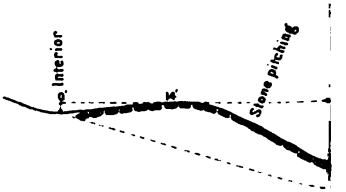

FIG. 16. SOUTH RAMPART

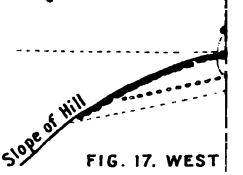

FIG. 17. WEST

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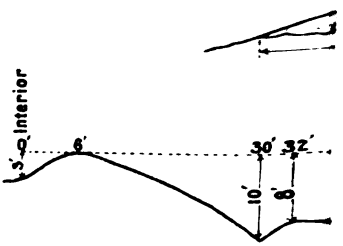

FIG. 14. EAST CIRCUMVALLATION

FIG. 20. MOUND OF HILL FORTLET.

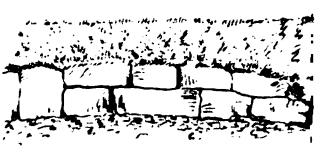

FIG. 21. ELEVATION OF MOUND
$\frac{1}{8}$ inch scale.

FIG. 22. REMAINS OF GATE.
$\frac{1}{8}$ inch scale.

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Vol. XVII., Parts 1 and 2.

THE TRANSACTIONS

AND

JOURNAL OF PROCEEDINGS

OF THE

DUMFRIESSHIRE AND GALLOWAY

Natural History and Antiquarian Society

FOUNDED NOVEMBER, 1862.

SESSIONS 1900-1901, 1901-1902.

PRINTED AT THE STANDARD OFFICE, DUMFRIES.
1905.

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Note as to the Publication of the Transactions.

The Council of the Society desire to intimate that to facilitate the binding of the Annual Transactions it has been resolved that a Volume shall consist of Five Annual Publications. The Volume now published for the years 1900-1, 1901-2 is therefore numbered Volume XVII., Parts 1 and 2, and the next issue for the years 1902-3, 1903-4 will be numbered Volume XVII., Parts 3 and 4, the succeeding issue being Part 5, which will contain the Transactions for the year 1904-5, and will complete Volume XVII. The pages of the parts forming each volume will be numbered consecutively throughout. Each volume will have a complete Index.

Dumfries, March, 1905.

Addendum to List of Honorary Members.

James M'Andrew, 21 Gillespie Crescent, Edinburgh.

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CONTENTS.

SESSION 1900-1.

Page.

Secretary's Report 2
Treasurer's Report 3
The Parish of Luce (Hoddam)—*Mr George Irving* 5
Vertebrates of Solway, a Century's Changes—*Mr Robert Service* ... 15
Meteorology of 1900—*Rev. Wm. Andson* 33
Some Observations on the Variation of Plants under Cultivation—*Mr Samuel Arnott* 41
Dr Archibald's "Account of the Curiosities of Dumfries" and "Account anent Galloway"—*The late Dr James Macdonald, F.S.A. (Scot.)* ... 50
Some Bird Notes from Eskdale—*Mr Richard Bell* 64
Forts and their Connecting Trenches in Eskdalemuir—*Mr Richard Bell* 76
Concerning the Market Cross—*Mr James Barbour, F.S.A. (Scot.)* ... 85
Scottish Burghal Life in the 16th and 17th Centuries, illustrated by Extracts from Kirkcudbright Records—*Mr William Dickie* ... 90
Etymology of the word "Ruthwell"—*Dr Chinnock* 103
Botanical Notes for 1899—*Mr James M'Andrew* 106
Field Meetings 109

SESSION 1901-2.

Secretary's Report 119
Treasurer's Report 120
Addenda and Corrigenda of Lists of Mosses, Hepaticæ, and Lichens of the District—*Mr James M'Andrew* 121
Phenological Observations taken at Jardington during 1900—*Mr J. Rutherford* 125
First Account of the Excavations of Lochrutton Crannog—*Mr James Barbour, F.S.A. (Scot.)* 128
A Contrast in Prehistoric Forts near Dunscore—*Rev. Richard Simpson, B.D., Dunscore* 136
List of Birds of Glencairn—*Dr Martin, Holywood* 140
Meteorological Report for 1901—*Rev. Wm. Andson* 156
Phenological and Weather Observations taken at Jardington for 1901—*Mr J. Rutherford* 161
Phenological Observations taken at Moniaive during 1901—*Mr John Corrie, Moniaive* 164
The Fauna of Glencairn—*Dr Martin, Holywood* 166
Edward First at Sweetheart Abbey—*Dr Chinnock* 172
The Irvings of Hoddom—*Mr George Irving* 175
Lag's Elegy, and other Chap Books—*Mr Frank Miller* 203
Geology of the Dumfries Basin—*Mr James Watt* 216
Field Meetings 223

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PROCEEDINGS AND TRANSACTIONS

OF THE

DUMFRIESSHIRE AND GALLOWAY

NATURAL HISTORY & ANTIQUARIAN SOCIETY.

SESSION, 1900-1.

26th October, 1900.

ANNUAL MEETING.

Mr JAMES BARBOUR, F.S.A., Architect, in the chair.

New Members.—Mr R. Y. Pickering of Conheath; Mr Robert G. Mann, Cairnsmore, Dumfries; Mr W. H. Veitch, Hoddom Estate Office; Mr Charles Watson, Solicitor, Annan; Mr James Ballantyne, Editor, *Courier and Herald;* and Mr Bertram M'Gowan, Solicitor, Dumfries.

Donations and Exchanges.—Memoirs of Peabody Museum I., 1, 2, 3, 4. New York Academy of Sciences, the Devonian Lamprey. Transactions of Canadian Institute, semi-Centennial Memorial Volume; Bulletin of the Geological Institution of the University of Upsala; Communicaciones del Museo Nacional de Buenos Ayres, Tomo I., 6; Year-book of the Department of Agriculture, U.S.A., 1899; Proceedings of the Society of Antiquaries of Scotland, 1898-99; Proceedings and Transactions of the Nova Scotian Institute of Science, X., 1; U.S. Department of Agriculture, Legislation for Protection of Birds, Revision of American Voles

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of the genus Microtus; Proceedings of the Canadian Institute II., 3; Proceedings of the Academy of Natural Sciences of Philadelphia, Pt. III., 1899. U.S. Department of Agriculture—Food of Bobolinks, Blackbirds, and Grackles, by F. E. Beal; North American Fauna, No. 18; Revision of Pocket Mice of the genus Perognathus, by Wilfrid H. Osgood. Proceedings of the Natural Science Association of Staten Island, Vol. vii., 15, 16, 17, 18; Transactions of Glasgow Natural History and Antiquarian Society; Publications of the Carnegie Museum, Pittsburg, 6, 7; Proceedings of the Davenport Academy of Natural Sciences, Vol. vii., 1897-99; Proceedings of the Rochester Academy of Science, Vol. iii.; Proceedings of the Academy of Natural Sciences of Philadelphia, 1890, Pt. 1, Jan. and Feb.; Indian Meteorological Memoirs, X., 1, 2, 3, 4.

The Rev. Mr Andson, Librarian, reported that Dr Chinnock had presented to the Society a portrait of the late Joseph Thomson, the African traveller, which was accepted with thanks.

Mr James Barbour presented to the society his "Excavations of the Camps and Earthworks of Birrenswark," for which he was thanked.

SECRETARY'S REPORT.

The Secretary (Dr J. Maxwell Ross) then read his annual report as follows:—

During the session there had been four deaths and nine resignations among members. Nine new names had been added to the roll, which now contained 15 honorary, 14 life, and 184 ordinary members. The number of ordinary members had been reduced by the death of Dr Macdonald, the distinguished authority on Roman Remains in Scotland. Dr Macdonald was a well-known classical scholar, a great educationalist, and a painstaking archæologist. Some of their members were his pupils at Ayr, others assisted him in Kelvingrove, and they had as a society benefited by his work at Birrens and elsewhere. Six monthly and two field meetings were held during the year. At the former ten papers were submitted and several exhibits shown. The field meetings were to Balmaghie and Glenlochar to view the supposed site of an ancient Abbey, and to the Lochrutton waterworks and crannog.

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In the latter excursion the members had the advantage of the presence of Dr Munro, who gave it as his opinion that the crannog was well worthy of investigation, and that excavations should be made in it. Mr Murray, one of their vice-presidents, had consented to collect subscriptions to defray the expenses of these excavations.

TREASURER'S REPORT.

The Treasurer (Mr J. A. Moodie) read his annual report from 1st October, 1899, to 30th September, 1900:—

CHARGE.

Subscriptions from 139 Members at 5s each			£34 15 0
Do. ,, 9 ,, 2s 6d each			1 2 6
			£35 17 6
Entrance Fees from 9 New Nembers			1 2 6
Arrears of Subscriptions paid			2 5 0
Subscription paid in advance			0 5 0
Copies of Transactions sold			0 12 6
Interest on Bank Account			0 3 0
Balance due to Treasurer	£3 1 11		
Less Balance in Savings Bank	0 15 6		
			2 6 5
			£42 11 11

DISCHARGE.

Balance due Treasurer at close of last Account			£8 19 11
Less Balance in Savings Bank			0 12 6
			£8 7 5
Paid Salary of Keeper of Rooms and additional Allowance for Heating Rooms during Winter Months			2 15 6
Paid for Stationery, Printing, &c.			2 3 6
Paid for Periodicals and Books			3 5 8
Paid for Coals and Gas			0 15 0
Paid Fire Insurance Premium, less bonus			0 1 2
Paid for Repairs			0 7 6
Paid Expenses of calling Meetings:—			
Post Cards	£4 5 0		
Addressing same	1 0 0		
Printing same	0 18 0		
			6 3 0
Carry forward			£15 18 11

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Brought forward				£15 18 11
Paid Expenses of publishing Transactions for last year as follows:—				
"Dumfries Standard" for Printing ...	£15	12	0	
Postage of Transactions	1	8	6	
Delivery of Do.	0	3	6	
				17 4 0
Paid Secretary's Postages and Outlays				0 7 6
Paid Treasurer's Do. Do.				0 16 1
Miscellaneous Payments				0 5 7
				£42 11 11

Statement as to the cost of publication of "Birrens and its Antiquities" for year ending 29th September, 1900.

Balance due to the Treasurer as at 30th September, 1899 ...	£11 0 10
Less 2 Copies sold at 3s each, 6s	0 6 0
Balance due Treasurer	£10 14 10

ELECTION OF OFFICE-BEARERS.

Hon. President—Right Hon. Sir HERBERT MAXWELL, Bart., M.P.

Vice-Presidents—Rev. JOHN CAIRNS, Mr ROBERT MURRAY, Mr JAMES BARBOUR, and Provost GLOVER.

Joint Hon. Secretaries—J. MAXWELL ROSS and BERTRAM M'GOWAN.

Treasurer—J. A. MOODIE.

Curators of Library and Museum—Messrs ANDSON and LENNOX.

Curators of Herbarium—Professor SCOTT-ELLIOT, Misses HANNAY and Miss CRESSWELL.

Council—Messrs JAMES CLARK; JAMES DAVIDSON MAXWELL, Terregles Bank; STARKE, Troqueer Holm; W. MURRAY of Murraythwaite; Dr CLARK, Miss HANNAY, and Miss CRESSWELL.

Mr Robert Murray reported that he had collected a sum of £26 for the purpose of carrying on excavations at the Crannog at Lochrutton and for other smaller work.

16th November, 1900.

Mr JAMES BARBOUR in the chair.

New Member.—Mr John S. Stobie, Upholsterer, Dumfries.

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Donations and Exchanges.—Transactions and Proceedings of the Botanical Society of Edinburgh, Vol. xxi., Pt. iv.; Annals of the Andersonian Naturalists' Society, Vol. ii.

COMMUNICATIONS.

I.—*The Parish of Luce (Hoddom).* By Mr GEORGE IRVING, Corbridge-on-Tyne.

There is very little now to be seen of Luce except a few fragments. It was formerly a parish, and a church was founded here by St. Kentigern in the sixth century. The ancient parish of Luce, now part of Hoddom, seems to have been bounded by Annan Water on the west, by Mein Water on the north-west, until it joined Pennersax, opposite Newbiggen, then it struck south to the Brownmuir through the wood by the existing march fence until it meets the Bonshaw estate, then following the boundary of the Bonshaw estate down Butcherbeck Burn to Annan Water, near Cleughheads. The area of the parish was about 1200 acres. Little is now known about its ecclesiastical history. In Laing's Charters, under date 16th December, 1559, it is mentioned that Andrew Layng, rector of Hoddom, and Johannes Layng, rector de Luss, were witnesses to the confirmation of a charter by Gavin Hamilton, commendator of Kilinning, to Adam Montgumry.

The vale of Hoddom as seen from Luce old churchyard, about 120 feet above sea level, is rich and beautiful. Nature seems to have been in a lavish mood when it was made. No wonder St. Kentigern pitched his little Mission Church here. Looking northwards you see Annan Water debouching through the gorge opposite Hallyards and flowing past the site of the old parish church, and rolling its dark waters past the base of Repentance Hill and Woodcockair, and absorbing Mein Water as it rolls on its way round the rocky point at Luce and on past Bridekirk on its way to the Solway Firth. Two miles away is Hoddom Castle with its turrets, and on the left the near horizon stretches over the gentle elevation called Barrhill, well known to lovers of the leish. The Caledonian Railway creeps serpent-like round its base, separating from Barrhill the ridge over Cowdews, Haregills, Douglas Hall, and Birrenswark.

On the north-east is seen Ecclefechan nestling between

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the Clint Hill and the Trumpet Knowes on the south-east. The Brownmuir closes in the fertile vale, which is sheltered from "a' the airts the wind can blaw." The three churches as seen from Luce form the points of a triangle. Ecclefechan old church is 2400 yards from Luce, Luce 2220 yards from old Hoddom, and old Hoddom from Ecclefechan 3500 yards. Immediately in front, a mile and a half distant, stands Knockhill, on a gentle elevation overlooking the vale of Hoddom and away down the course of the Annan to the Solway. The greater part of the old churchyard, including the site of the old church, has been ploughed for fifty or sixty years. There is a small corner fenced off (round the Irving tomb) into which a number of old tombstones have been dragged and thrown about in a very disorderly fashion. The foundations of the old church as traced by Mr Kennedy, farmer in Luce Mains, when ploughing the field, shews the church to have been about 30 feet long, by 15 feet wide, and the west end about 50 feet from the east end of the Irving tomb. The site is indicated by a X on the 6 inch ordnance survey. After the Reformation the parish of Luce, Hoddom, and Ecclefechan were united into the present parish of Hoddom in 1609. The parish manse stands on the glebe. In the valuation of 1667 Luce is described as

	MKS.	S.	D.
The fourtie shilling land of Newpark	140	0	0
The six merkland of Luce	150	0	0
The lands of Luce pertaining to Jaffray Irving ...	120	0	0
Kelheads rent received from Adam Carlile	40	0	0
The rest of Kelheads lands in Luce	82	0	0

In the early part of the sixteenth century the lands of Luce belonged to Lord Carlyle, and was sold to Jeffray Irving, who purchased the Three Merkland of Luce from Lord Carlyle, anno . . . and a charter of the lands was granted by Michael Lord Carlyle in 1542. These lands were part of the lands now belonging to Alexander Pearson, Esq. The Carlyles have left no records behind them except a few tombstones in the old churchyard to the memory of some of their descendants in the 18th century. In 1823 there was a John Carlyle who was the owner of one-eighth of Dornocktown, who appears to have been a descendant of the Carlyles of Luce. "On 13th July, 1612, charter

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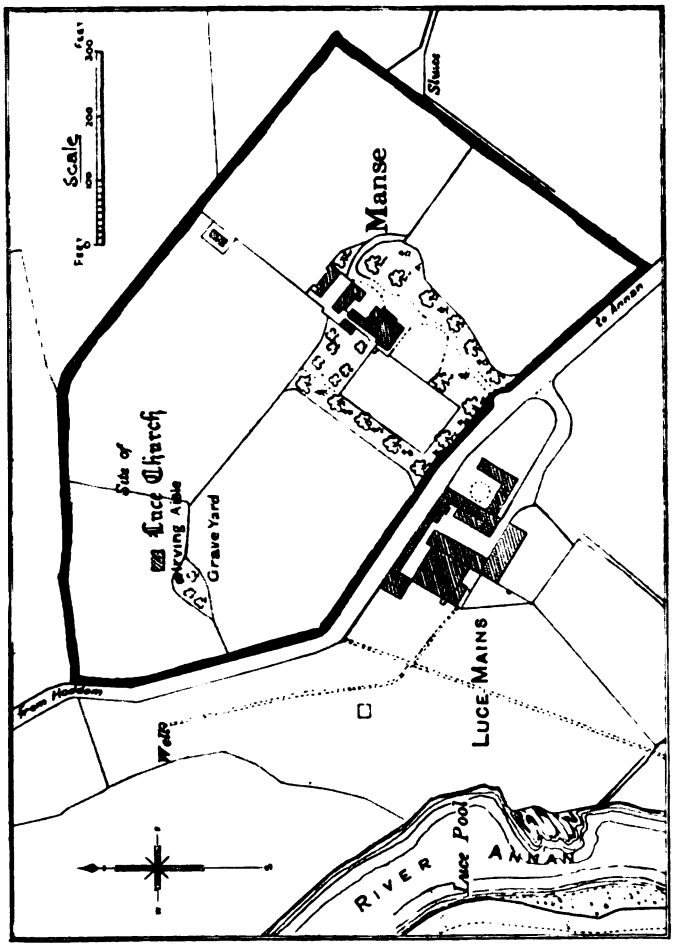
"by Dame Elizabeth Lady of Carlile granting to James Johnstone "of Wastraw the Five Merk Lands of Stank, in the parish of "Dornock, Stewartry of Annandale, and Shire of Dumfries. To



"be held feu farm for 13s 4d yearly. Witnesses—James John- "stone of Beirholme and William Irvine of Kirkconnell, Gavin "Blair, writer in Edinburgh, and others. Signed 'Elizabeth, Lady "Cairlel.'" There is one large tombstone known as the Carlyle

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tombstone lying flat on the ground, with an inscription in large capital letters about 2½ inches long in relief.

Here lyes Ane Honest Gentleman called Adam Carlel of Milnflat, who died May 18, 1681. His age was 96. The youngest may die, but the aged must sooner or later. Dust returns to Dust."

IN MEMENTO MORI.

"Milnflat" is the adjoining farm now known as Meinbank. The above Adam Carlel was in 1667 paying Douglas of Dornock 40 merks per annum as rent of land in Luce. One of the tombstones records that

Here lyes James Carlyle in Dornock, who died 31 day of March, 1732, aged 86 years, and Jean Carlyle, daughter to Robert Carlyle in Foulsyke, who died ye 5 of May, 1746, aged 22 years. Here lyes Robert Carlyle in Dornock, who died April 10, 1768, aged 78 years; also Jannet Bell, his spouse, who died Feb. 4, 1779, aged 77 years.

Another stone records that

Here lyes Jannet Little, spouse of James Carlyle in Dornock, who died 25 Jan., 1729, aged 69 years, and John Carlyle, son of the sd James Carlyle, who died 20 Feb., 1763, aged 65 years, and James Carlyle, son to the said James Carlyle, who died 4 June, 1706, aged 20 years, and Janet Carlyle, daughter to the said James Carlyle, who died 24 Oct., 1713, and Nicholas Carlyle, another daughter, who died 26 Nov., 1752.

(Here there is a shield in the form of a heart.) The initials on the shield are those of James Carlyle and Jannet Little. Then follows:

Here lyes Bridget Bell, spouse to the above John Carlyle, who died 16 July, 1784, aged 76 years.

The Carlyles of Luce and Bridekirk were ancestors of Thomas Carlyle. The Irvings succeeded the Carlyles as owners of Luce early in the 16th century. There is an aisle or tomb standing in the churchyard with a door in the west end. The east end is semicircular. Over the doorway is a shield and scroll, with the motto "HAUD ULLIS LABENTIA VENTIS" surmounting a shield with three holly leaves, with the date 1700. In the scroll on the left-hand corner is the letter Z, and at the opposite end of the scroll is the letter U. Inside there is an ancient grave cover to the memory of Jeffra Irwing. It is 5 ft. 9 in. long, 18 in. at the head, and 15 in. broad at the foot. It has a plain surface, and round the bevelled edge is the following inscription in large capital letters, in relief, date 1649:

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Here lyes Ane Honest Gentleman, called Jefra Irwing, of Luce, who died 18 March, 1649, aged 60.

Jeffray Irving's Tomb.

The above is to the memory of the grandson of the first Jefra of Luce. There is built into the semi-circular gable in the inside a tablet about 3 feet square, bearing the following inscription :—

To the memory of Jeffray Irving, who purchased the Three Merkland of Luce from Lord Carlyle, anno . . . And John Irving, his son, and Jaffray Irving, his grandson, who obtained a Charter of the sd lands from Michael Lord Carlyle, anno 1542. As also John Irving, his son, and Jaffray Irving, his son, who died 18 March, 1649, ag'd 60 years. And

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William Irving, his son, who died 9 Feb., 1719, aged 96 years, and John Irving, his son, who died 21 April, 1734, aged 65 years.

TRANSIT GLORIA MUNDI.

Jaffray Irving in 1547 was returned as able to bring 93 men into the field. See Bishop Nicholson's Legis Marchiarum List of Clans who submitted and gave pledges to Lord Wharton that they would serve the King of England 1567, but this number might include Woodhouse. There is another tombstone which records that

Here lyes John Irving, who lived in Broachhead 72 years, and died there the 12 of Febry, 1619, aged 104 years, lawful son of David Irving was lawful son to the Laird of Wisbie, and John Irving, his grandchild, who died 16 March, 1695, aged 32, son of William Irving in Broachhead (Broachhead now forms part of Luce Mains).

In 1611, in the Register of the Privy Council in Edinburgh, among other border records "David Irving, callit of Wisbie, was "described as man to Jock of Luce." It is also recorded in 1625 that Jaffray Irving becomes cautioner in 500 merks for David Irving in Middleshaw. Another stone

In memory of Gavin Irving, son of William Irving, in Broachhead, who died at Blackitlees March 21, aged 70 years, and Jean Ferguson, his spouse, who died at Warmanbie, June 12, 1782, aged 82 years.

Blacketlees is a farm on the west side of the River Annan, was owned by Irving of Cove in 1711, and feued to George Irving in life rent and William Irving, his son. Mr Irving, minister of Newabbey, was proprietor of Blacketlees about 1752. In 1770 Blacketlees was the property of Dr Wm. Irving, evidently the Wm. Irving above referred to.

The Irvings of Luce seem to have shared the bad luck of many of their clan, and were obliged to part with their estate early in the 18th century to Douglas of Dornock. In the old valuation of 1667 Douglas of Kelhead received 40 merks per annum as rent from Adam Carlile, and had other lands in Luce valued at 82 merks. James Douglas the elder and Archibald Douglas the younger of Dornock, in the early part of the 18th century, were very large landowners in Dornock, Hoddom, and St. Mungo. In 1718 Douglas acquired several farms in Hoddom from Wm. Irving of Kirkconnell, in addition to what he had in

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Luce. In 1768 Archibald Douglas sold his Hoddom and other estates by roup, viz. :—

Lots First and Second. Bodesbeck, Castlemilk, Castlemilkhill, Castlemilktown, Shawhead, and Broatshaw, Middleshaw, Brocklerigg, Blackford, Kettleholm, Greatwath, Cleughaide, Eskdalrig, Breckonhillhass, Kirkbank, Douglashall, Park at Douglashall, and Brettonwalls, for	£5599	16	10½
Thirdly. Feu duties of Gibsonstown, Cowestone, Sorrysyke, Howcleugh, Bankside, Northcroft, Ettrickholme, Highlaw, Strands, Mellantachead, Holmfoot, and Skellyholm	2079	16	0
Fourthly. Woolcoats, Relief, and Byerstoun, Axletreewell, Burnswarkhill, Westgill Miln and Park at Burnswark, with the Pertinents	1988	4	4
Fifthly. The Feu Duties of Upper Cleughbrae ...	432	0	0
Sixthly. One eighth-part of the Town of Dornock remaining unfenced, Foulsyke, Butterdales, for	1073	18	5
Seventhly. The Feu Duties of seven eighth-parts of Dornock at	895	7	6
Lastly. The Fishings on the Solway Firth belonging to the estate of Dornock	540	0	0

Conditions attached. "That the purchaser of the Fishings shall satisfy himself with the Title already produced in the sale, and in case of eviction shall have no recourse against the said Archibald Douglas the common debtor or the creditors who receive the price." The word "creditors" in the above conditions reveal the cause of the sale. Luce was not offered for sale at the Roup. In 1768 Archibald Douglas of Dornock was stented for repairing the Manse at Hoddom £17 16s 3d. Luce passed from Douglas to General Dirom in or about the year 1795.

In the garden in front of the Farm House at Luce Mains there is a stone with the Douglas arms carved in bold relief representing the flying heart surmounted by a coronet, with the motto "FORWARD" in Roman capitals—date 1778. The stone is 2 ft. 4 in. high, 10 in. broad at the foot, and 16½ in. at the top, with a margin of 3 in. all round. It has evidently been made for the keystone of an arch. Tradition says it was cut by "Old Mortality." This may be, as Robert Paterson was related to the then tenant of

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Luce Mains. It used to be fixed in the gable of the old barn, and when the barn was pulled down it was removed into the garden for safety. These interesting relics are all I could find relating to the Douglas.

Douglas Arms, Luce.

At the farm of New Orchard there is a stone tablet built into the garden wall about 4 feet high by 3 feet broad. At the top cut in a scroll is the date 1772 and the word "sicker" in capital Roman letters, each about 1½ in. long. There is an inscription at the foot of the tablet as under: "Archibald Douglas, Esquire of Morton, erected this stone 1784." On the door lintel entering the garden there is an older stone with the following initials and date: "I I E 1672." The length of the stone is 3 ft. 9 in., 6 in. deep, and 13 in. broad. It has evidently been part of some older

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buildings. In the centre is a small shield about 8½ feet broad at the top. On the left half of the shield are three holly leaves cut in relief, and on the right half two diagonal cross bars in relief.

Photo by J. B. Irving, Esq.

Douglas Tablet at New Orchard.

On the sides of the shield is the date 16 on the left and 72 on the right. Near the end of the stone on the left, in a small panel, are two letters "I I," and in a corresponding panel on the right is the letter "E." The letters "I I" and the three holly leaves on the shield indicate that it records some of the Irvings who were owners of New Orchard in 1672, but I cannot make out what the letter "E" means. In the Valuation Roll of 1823 Archibald Douglas, advocate, is returned of part of Kirkconnel, called New Orchard, of the annual value of 40 merks.

The Laird of Luce was great grandson of Archibald Douglas

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of Dornock, second son of the first Earl of Queensberry, and son of the last Laird of Dornock by a daughter of Sir James Johnstone of Westerhall. His father sold the estates of Dornock to the Duke of Queensberry, but bought Castlemilk, which he sold in 1768. He was a madman, and dangerous in his cups. Displeased with a ploughman, he immediately whipt off one of his ears with a gullie which he happened to hold in his hand. Another account is contained in a letter to Matthew Sharpe, Esquire of Hoddom, at Edinburgh :—

"Dr Sir,—I take the opportunity of the bearer Mr Scot to "let you know from good authority the most deliberate action I "ever heard in our country. Young Dornock last Thursday's "night in his lady's room and presence ordered his servant George "to sit down on his knees and be sure to pray well, for he was to "be a dead man in a very few minutes, and his lady begged him "not to shoot the innocent lad but rather shoot her than anybody "else. He fired a loadin pistol on the lad, missed him, and for "all that they could do fired a second, which he had in his pocket, "shot the lad beneath the left arm, run to Pennershaughs, but "could not get John Carlyle's beast to run away on, and told him "he had shot George. A despatch was sent to Doc Maxwell, who "told them he was not a surgeon, another to Doc ———, who told "them George was a dead man, a third to William Cranston, "Dumfries, who dressed his wounds, and is in hopes of his re-"covery. I am, sir, your most humble servant, William Irving."

They say the cause was jealousy, and George passed for dead all Friday. His son is described as a "truculent faced squinting "fellow who was perpetually drunk and armed with pistols, which "he made very little ceremony of discharging. His cousin Sir "William Maxwell never dared to pass the door of his house. He "actually shot one Little, a farmer of his own, and was tried for "the murder at Dumfries; but by the help of money and abund-"ance of perjury he was brought in insane and confined at Dum-"fries till his death. When drunk he was certainly mad, but not "otherwise. He died during the first decade of this century." So wrote C. K. Sharpe to Walter Scott, Esq., in 1812.

Little's tombstone is in Hoddom churchyard, and has the following inscription :—

In memory of Archibald Little in Park, victim to the malice of Wm. Douglas, late proprietor of Luce, who, having threatened to murder him,

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actually perpetrated the same at Luce without any provocation by shooting him with a pistol on the morning of Friday, the 24 July, 1795. He was aged 35 years 3 months and 11 days. His corporeal remains were deposited here on the 27th of the above month.

So ends the tragic connection of the last Douglas of Dornock with Luce.

II.—*The Vertebrates of Solway—A Century's Changes.*

By Mr ROBERT SERVICE.

Looking over the records of the century that has just passed away, the naturalist will find that the changes that have taken place amongst the members of our indigenous fauna are numerous and interesting. Some species have gone altogether, and we shall know them no more as local inhabitants. Many have sadly diminished from former abundance. Others, again, have risen enormously in numbers, and a few, quite unknown here when the century began, have arrived in our district and assumed a foremost place in the attention of the student of these important interfaunal relations.

The great agricultural progress made during the century has had much effect on our native species. With the extensive drainage that has taken place, and reclamation of bog and moss, the wild fowl have been dispossessed of their chosen haunts. The numbers of several species of wading birds have become more and more restricted.

The re-afforesting that took place to such a wide extent in the earlier years of the century provided homes and shelter for such species as the Roedeer and the Squirrel. The hedge enclosures, with rows, belts, and clumps of ornamental or "wind breaking" trees, have greatly encouraged the propagation of small passerine birds.

Arable land has gone out of fashion in a marked degree, and pastoral cultivation is taking its place, to the advantage of such species as the Starling. On the rougher and hill portions of the country, Black Cattle have long since been replaced by sheep. One consequence is that heather is slowly dying out. No heather patches ever extend now, and plenty of it has disappeared altogether.

Many members of our fauna have suffered severely from game preserving. Since early in the 20's the passion for this form

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of sport has gone on increasing. A more discriminating method of keeping down the enemies of game is now in the ascendant, under which Buzzards, Kestrels, Owls, and others ought to receive the total exemption from ruthless slaughter to which they are entitled. From the naturalist's point of view there was a compensating advantage in even the merciless old system of game preserving. It resulted in a maximum stock of small birds, which in their haunts on the mosses, woods, and coverts enjoyed almost complete immunity from raptorial birds, and an undisturbed quiet during the nesting season.

I am bound to note the agreeable fact that public opinion favours the preservation of all the members of our fauna, and does not regard the Acts passed in recent years for the protection of birds, their eggs, and young, as in any way irksome. The healthy opinion prevails that the enactment in question to maintain the feathered tribes is one to be respected not only by all lovers of wild life, but by the community as a whole.

"Introductions" have not been without considerable mark. The Rabbit, the Varying Hare, the Pheasant, and the Grayling are introduced species, and it is perhaps quite unnecessary to observe that all of them are here to stay.

Probably some of the changes noted, such as the lessening numbers of the Martin and the Barn Owl, the arrival of the Pied Flycatcher and the Stock Dove, as well as the change involved in the abundance in which the Tufted Duck now remains in summer, may be attributed to some slow and obscure alteration in climate. No evidence, however, can be adduced from meteorological records that any such change is in progress.

I ought to mention the changes that have taken place in regard to the principal vertebrate of all—man himself. A wonderful change has taken place in Solway and elsewhere within the century. Go where you will you will see roofless and ruined cottages dotted over the country. In some villages half the houses are roofless and ruined; and the groups of Ashtrees or a few Rowans—perhaps the free growth of a bed of nettles, or the greener verdure of a grass mound—sufficiently attest to the observer the sites of homesteads that have otherwise completely disappeared. Some may look on such a change as merely one of social economy. Whatever may be the deeper reason, the one on the surface is easily seen. The people have left and are

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leaving the land to reside in towns merely because employment, and therefore food, are more easily obtained there. In this respect man is almost on the same level as the beasts of the field and the fowls of the air.

By the term "vertebrates" it is, perhaps, quite unnecessary to explain that the back-boned animals are meant. These, of course, comprise the mammalia, the birds, the reptiles, and the fishes. "Solway" is one of the faunal districts into which the late Dr Buchanan White divided Scotland. These divisions are in all cases based on the watershed (so far as the mainland is concerned), and in practice are very convenient, and they are accepted and used by all working Scottish zoologists. I have said that Dr Buchanan White, in arranging these faunal areas, "divided Scotland," but, as a matter of fact, he was compelled by watershed considerations as he went along the Borders to appropriate rather considerable slices from Cumberland and Northumberland. In doing so, Dr Buchanan White shewed conclusively that nature had not erred. The mistake of supposing that Cumberland and Northumberland lay altogether in England has arisen simply through political exigencies. It will serve our present purpose best to consider "Solway" roughly as all the country that lies betwixt the Esk and Lochryan. The large bit of Cumberland and the little bit of Ayrshire that properly belong to "Solway" may at this time be left out of consideration in discussing our subject.

MAMMALIA.

THE WILD CAT (*Felis catus*, Linn.).

This fine creature has long been extinct here. In Dumfriesshire few of them survived when the century began. The last record I can find for the county is that of a wild cat shot on the heights of Middlebie, betwixt Wastwater and Cruive, in January, 1813. It must have been an extraordinary large-sized animal, for it is said to have measured 3 feet 9 inches in total length. In the Stewartry wild cats lived only a little longer, one having been killed by a Mr Beck, then farmer in Balmangan, about 1820. Mr John M'Kie, of Anchorlee, Kirkcudbright, told me in a letter written in September, 1880, "that it was related to him when a boy by a native of Borgue, named James M'Taggart, that he saw two foxhounds belonging to Alexander, the county huntsman, so torn by one or more wild cats near the cliffs at Senwick glebe

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that they had to be destroyed, and that ever afterwards Alexander avoided the place when hunting." There is a widespread belief amongst British zoologists that there is now no real wild cat left in Great Britain. It has been absorbed by the "predominant partner" the domestic feline. Certainly wild cats with all the typical characters of the species have become of great rarity, even in places such as the deer forests, where these cats are not specially destroyed.

THE WEASEL (*Mustela vulgaris*, Erxl.).

Has become comparatively scarce nowadays. Formerly found in great plenty everywhere.

THE ERMINE (*Mustela erminea*, L.).

This species has become greatly less common within the memory of most persons. During the prevalence of the Vole plague of the years 1888 to 1892, both the Ermine and the Weasel had a considerable amount of tolerance extended to them. The idea was widely expressed by those dependant on pastoral farming that the Vole plague would not have assumed its vast dimensions had there been a natural stock of the two animals under notice. Neither of them is the unmitigated vermin they are so often asserted to be, and it is regrettable that they should be destroyed in the undiscriminating way now in fashion.

THE FOUMART (*Mustela putorius*, L.).

The Foumart was very common during the first half of the century. It then quite abruptly decreased to great scarcity. Although perhaps not quite extinct yet, the odd stragglers that now and again are reported at intervals of several years may be immigrants from outside our area. More probably they are only very dark-coloured Ferrets that have escaped from their owners. Rabbit-trapping is accountable for the disappearance of the Foumart. At the old fur markets that used to be held in Dumfries during the Candlemas Fair the skins of these animals brought good prices. In 1857 it was as high as 45s per dozen. As many as 600 skins were exposed, as happened at the fair of 1831.

THE BADGER (*Meles taxus*, L.).

This is another animal whose status has gone down to the

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verge of extinction. While never really common, it was well known and of general distribution. For the last half century its existence has been precarious. There have been several introductions on well-known estates, and this has helped to maintain the Badger as a local animal. Although the general opinion is that the last of the native Badgers met their fate about 1860, there is a reasonable belief that all along the old indigenous breed has had a survivor here and there. "Dumfries Badgers," which, however, were nearly all procured in the Stewartry, were at one time in great demand by our southern neighbours, and were reckoned the gamest that could be obtained anywhere.

THE COMMON SEAL (*Phoca vitulina*, Linn.).

There is every reason to believe that the Common Seal does not visit our waters with the regularity that was formerly the case. Up till the last ten or twelve years a few stragglers of the herd that annually migrates in late autumn along the western shores of Scotland reached the Galloway coast, and from the middle, or end, of October till March, Seals used to be observed, and occasionally captured, almost every season. For a good many years past Seals have become much more infrequent.

THE RED DEER (*Cervus elaphas*, Linn.).

"The range of the Red Deer, formerly extending over all our province and much farther south, is now far to the northward." So said Sir William Jardine in an address delivered here in 1860. According to the writer of the "Statistical Account" of Moffat parish, "the last hart was killed there in 1754, having been long single." The range betwixt Dumfriesshire and Lanarkshire was, as may easily be supposed, a famous place for deer. In the ballad of "John of Breadislee" we read that the redoubtable borderer

> . . . has gone to Duriedeer
> To hunt the dun deer down.

A stag was killed at Eaglesfield, in Dumfriesshire, on 25th October, 1815, a Mr Clark, of Broughton, having been gored and killed by it. It had been hunted from Dalemain, near Penrith, through Carlisle and Cockermouth and far across the borders. In Symson's "Galloway" (1684) there are some references to the presence of "very large red deer" about the "remote parts of that great

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mountain" (Merrick). I bought at a book sale one day a work in two vols., entitled "The Natural History of Quadrupeds and Cetaceous Animals," published at Bungay, in Suffolk, in 1811. The work is profusely illustrated with coloured plates, but is a mere compilation, and its only value is its extreme scarcity. I find an allusion therein (vol. ii., p. 209) to the Galloway deer, which is of interest. "So late as in the beginning of the last century (1700) there were Red Deer scattered over the hills of Galloway. But by the eagerness with which the peasants pursued them they have been long since exterminated from that district." A remnant must have been left, for, according to the "New Statistical Account," Kells parish, February, 1844, "deer were occasionally seen in the remembrance of some old people."

THE FALLOW DEER (*Cervus dama*, Linn.).

The "New Statistical Account" records in the notes to the parish of Johnstone that in 1780 James, Earl of Hopetoun, brought a dozen of Fallow Deer to Raehills, where they were placed in an enclosure, but subsequently broke out and were never confined again. They gave rise to a numerous herd that roamed at large in Upper Annandale, and in 1844 it was computed that they numbered upwards of 200. Orders to destroy them were issued, and although more than 50 were killed within a week their utter destruction was not accomplished before the orders were recalled. It is believed that possibly a few descendants are still at large, but as these may be confused with individuals recently escaped from the parks, there can be no certainty.

THE ROE DEER (*Capreolus Capræa*, Gray.).

I have been unable to ascertain with any certainty the date when this species became extinct in Solway. Probably it was not found here at any time during the 18th century. In the early part of the present century, when the great increase in plantations took place, suitable haunts for this woodland deer were offered, of which it took advantage when sufficient advance in their growth had taken place.

The return of the Roe to Annandale was put down by Sir William Jardine as shortly after 1854, but there is every probability that it was a few years earlier, for the writer of the account of the parish of Johnstone, in the N.S.A., states that "within

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these last three years a few Roe Deer have been discovered." An introduction on the Drumlanrig estates about 1860 helped to stock Nithsdale, and within a few years thereafter the Roe was quite common. By 1870 it had spread widely over Galloway, and is now everywhere numerous in suitable haunts.

WILD WHITE CATTLE (*Bos taurus*, L.).

The Drumlanrig herd were disposed of about 1780. A small herd were kept in Cally deer park. I have not been able to glean any precise information of the number of cattle that formed this herd. It appears that they were originally procured from the old historic herd belonging to the Duke of Hamilton, kept in Cadzow parks. They were all sold in 1846, after the death of Alexander Murray of Broughton.

THE SQUIRREL (*Sciurus vulgaris*, Linn.).

So generally distributed, and so common is this lively and pretty creature, that it is of special interest to find that the Squirrel is a very recent immigrant into Solway. When they became extinct here in olden days we have no precise knowledge. They reappeared in Dumfriesshire (Upper Eskdale) in 1837, or perhaps a year or two earlier, but it would be fully ten years later before they became quite common and began to spread westwards. They crossed the Nith about 1860, and soon became generally dispersed, reaching the Cree about 1873. That river appears to have been an obstacle not easily negotiated, as some seven or eight years elapsed before the Squirrels got across. Early in the '80's, however, they became general in Wigtown, and at the present day abound in many localities in that county.

THE BLACK RAT (*Mus rattus*, L.).

Has in all probability now become quite extinct as a local species. I have not seen or heard of it for a dozen years past. From time to time "Black" Rats are reported, but these invariably prove to be the fine black variety of the Water Vole, or, more seldom, the melanic variation of the species that comes next on my list.

THE BROWN RAT (*Mus decumanus*, Pall.).

Vastly more common everywhere than it has ever been before. I have a strong impression, induced by a long series of

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notes and facts of observation, that the Brown Rat now betakes itself to the fields and open country, away from dwelling-places, far more readily than was formerly the case. Along the shore line, too, there are large and increasing numbers to be found where at one time few, or none, were to be seen. On quiet evenings one has only to remain in hiding for a few minutes to see the Rats come out from under the rocks to feed upon mollusks and the rejectamenta of the tide.

THE COMMON HARE (*Lepus Europæus*, Pallas.).

In these days the Common Hare only manages to hold its own on estates sufficiently large to allow of efficient protection. How abundant the hares were before the passing of the Ground Game Act is a matter of common knowledge. At the Dumfries fur markets before alluded to hare skins were the staple commodity. Seldom less than 10,000 skins were sold, and in the later years during which the market existed 65,000 to 70,000 were sometimes disposed of. It is stated that so recently as 1874 no fewer than 180,000 hare skins passed through the hands of the Dumfries dealers.

THE MOUNTAIN HARE (*Lepus timidus*, Linn.).

The White Hare now frequents all our hills of 1000 feet and upwards, and very many of those of lower altitude, and a specimen has been shot so low down as the hill above Dalscairth. It was unknown in Dumfriesshire previous to so comparatively recent a date as the winter of 1863, when it was first noticed on the Moffat, Evan Water, Leadhills, and other ranges leading into Peebles and Selkirkshire. It was understood at the time that these Hares were the produce of some that had been turned down at Glenbuck by a Mr Hunter about 1861. But in a deeply interesting work, entitled "The Mammalia of the Edinburgh District," published in 1892, my friend Mr William Evans, the author of the book cited, shews that there were at least two other introductions to which, together with those set loose at Glenbuck, we are indebted for the present stock of Mountain Hares which are so widely and abundantly distributed over the southern uplands. Mr Clason of Hallyards procured a number of Blue Hares from the north, and set them free on the top of the highest hills in the parish of Manor, in Peebleshire, in 1845 or 1846.

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There was also another introduction on the Silverburn hills, the highest of the Pentlands, somewhere about the beginning of the '60's.

Spreading rapidly from the district around Queensberry, through the head of the Annandale watershed, the Varying Hare arrived in Eskdale in some numbers by 1868. It was about 1872 before it made its appearance westwards on the Galloway uplands. It is now widely distributed on all the hills of Solway.

THE RABBIT (*Lepus cuniculus*, Linn.).

When the century was young Rabbits were scarce enough. In the Rev. Samuel Smith's "Report on the Agriculture of Galloway," of date 1810 (a book that is now very scarce, and for a sight of which I am indebted to Mr Thomas Fraser, Dalbeattie), it is stated (p. 298) that "there are a few rabbits in one or two places in the Stewartry. . . . There is an extensive Rabbit warren in the sandy district near Glenluce." When Dr Singer wrote his "Agricultural Survey of Dumfriesshire" in 1812 he remarked (p. 384) that "a few Rabbits are to be found, but hardly worth mentioning. There is no regular warren." I have it from a trustworthy source that John James Hope Johnstone, M.P., brought one pair of Wild Rabbits from the South of England and set them at large some time about 1815, and that the descendants of this pair were popularly supposed to have populated the most of Annandale. Some time subsequent to 1825 the fox-hunting interest introduced Rabbits largely throughout both Dumfriesshire and the Stewartry (there were foxhounds kept in the Stewartry then), and ever since that time they have been plentiful enough. There is no mention of the number of Rabbit skins in our fur market reports until 1828, when 18,000 were exposed, and fetched 4s 6d per dozen. In 1816 they were sold here for 8s to 9s per dozen—a very direct evidence of scarcity.

AVES.

THE MISSEL THRUSH (*Turdus viscivorus*, L.).

Some fifty years ago was very uncommon. Now it is one of our familiar species.

THE COAL TIT (*Parus britannicus*, Sharpe and Dresser).

"This little species we think to be the most abundant, or one

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which, in winter at least, is seen in greater profusion in the South of Scotland than any of the rest of the tribe. Ten or twelve years since (say 1834 or 1832) it was by no means common, and its frequency now may be accounted for by the increasing age of the plantations and by the immense quantity of wood which has been lately planted and which is now advancing to maturity." So wrote Sir William Jardine when he issued his "History of British Birds" in 1844. Nowadays, and for many years past, Coal Tits, though common enough, cannot be considered "the most abundant of the tribe," they being exceeded in this respect by both the Blue Tit and the Great Tit.

THE MARSH TIT (*Parus palustris*, L.).

Was considered by Sir William Jardine to be not uncommon in Dumfriesshire about 1840. The reverse is the case now; indeed, until 1888 I had never seen the Marsh Tit near Dumfries. The species seems to be slowly becoming more abundant since the date mentioned, and a pair or two may be noted occasionally. In other parts of Solway it has never been, during my experience, more than very scarce and local.

THE WHITE WAGTAIL (*Motacilla alba*, L.).

Of late years this species has put in a tolerably regular appearance during the vernal migration. It seems to have been first noted here about 1880.

THE PIED FLYCATCHER (*Muscicapa atricapilla*, L.).

Now breeds regularly in several places in both Annandale and Nithsdale. There is a strong presumption that it is also resident in summer on the Stewartry side of the Nith. The Pied Flycatcher is an addition to our breeding birds, as it was found nesting in Solway for the first time in 1882. Previous to that date there was only one record for the species in Solway, so far as I know.

THE MARTIN (*Chelidon urbica*, L.).

The House Martin has shown a lamentable diminution of numbers within the last twenty years. Scores of farmhouses where it used to breed have now not a single pair attached to them. It has been alleged that great numbers of this homely little bird are killed on passage through France and Italy. While that is un-

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doubtedly the case, I am rather inclined to think that its increasing scarcity here is caused by some obscure climatic change.

THE GOLDFINCH (*Carduelis elegans*, Steph.).

Owing to bird-catching, and the great improvements in agriculture, whereby fields and wastes covered with thistles and other weeds have been done away with, the Goldfinch has decreased almost to vanishing point. It can never regain its former numbers, but a small remnant may exist if the Wild Birds' Preservation Acts are well enforced.

THE STARLING (*Sturnus vulgaris*, L.).

Within the memory of many persons still living, the Starling was either unknown or very rare. In the earliest years of the century the Starling was disappearing in Solway, and 40 or 50 years elapsed during which it seems to have been only a transient visitant. Then with the next score of years it very rapidly increased till it reached its present abundance everywhere. Details of its interesting history as a local bird need not be given. I have already published many such notes in the "Annals of Scottish Natural History" for 1895.

THE CHOUGH (*Pyrrhocorax graculus*, L.).

With the exception of a pair or two in the west of Wigtownshire, there are no Choughs now in Galloway. Once common, they became very scarce in Kirkcudbrightshire by 1865, and soon thereafter quite disappeared, with the exception of an occasional straggler from the Isle of Man, or Rathlin. Jackdaws have been freely blamed for frightening them away, but there is no evidence that they ever did so.

THE MAGPIE (*Pica rustica*, Scop.).

The Magpie still survives as a local species, and of late years seems actually to be slightly increased in numbers. Formerly very abundant, its decrease is attributable to game-preserving.

THE ROOK (*Trypanocorax frugilegus*, L.).

The Rook is entitled to particular attention in connection with my subject. While greatly diminished from its numbers of half a generation ago, the most interesting thing about the local and

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general Rook population is in the remarkable change of habits that happened towards the end of the '70's. Previous to that time they attacked the farmer's growing and harvested crops at the same time that they were destroying untold quantities of grubs and noxious insects. Then came a great change. Eggs of all kinds, young birds, small rodents, young rabbits, chickens, and ducklings were devoured as greedily as ever the Carrion Crow did the same thing. At the same time came a curious structural alteration. The feathers round the base of the bill, which always used to fall off during the young Rook's first summer and winter, were in many cases retained for years. There is no doubt this retention of these feathers was the direct result of the assumption of Carrion Crow habits by the Rooks. So, of course, the gamekeepers were everywhere up in arms against the Rooks, with the usual result. I am not blaming them, for Rooks, with their present propensities, must be bad neighbours to a Pheasant preserve. The cause of such a sudden change to what may be considered ancestral habits, after a most lengthened period during which no charges of that particular kind were ever laid against them, is rather obscure. The best explanation is that of my friend Mr John Harvie Brown —the foremost of Scottish naturalists. He traces it to two causes. The first one is the immense increase of the Starling, depriving the Rooks of their grub and insect food. The other is the practice all over the country of spreading on the fields near the larger towns of so-called scavengers' manure or refuse. Egg shells and garbage of all kinds are amongst the stuff, and the Rooks, compelled to forage amongst it, soon learned a bad lesson. The whole matter is well worth fuller investigation than has yet been given it.

THE BARN OWL (*Strix flammea*, L.).

This is another bird that seems dying out from some unexplained cause. There are very few left now.

THE HEN HARRIER (*Circus cyaneus*, L.).

The Hen Harrier is a bird that probably very few local naturalists have ever seen alive. And yet half-a-century or more ago it existed in hundreds all over the mosses and moors of our area. Game-preserving has sealed its doom, and so also has it that of the

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COMMON BUZZARD (*Buteo vulgaris*, Leach),

of which a few pairs only are now left on suitable tracts of country.

THE GOLDEN EAGLE (*Aquila Chrysætos*, L.).

This Eagle nested in Dumfriesshire up till 1833, and till well after 1850 on some of the Galloway hills.

THE SEA EAGLE (*Haliætus albicilla*, L.).

The Sea Eagle has been much scarcer everywhere in Britain than the Golden Eagle, not receiving, like its congener, the protection of the deer forests. There were eyries of this species on the Burrow Head and Mull of Galloway at the beginning of the century, and it is said to have been White-tailed Eagles that bred on Loch Skene. I doubt this, and am of opinion that the White-tailed Eagle ceased to nest in Solway considerably earlier than the Golden Eagle did.

THE OSPREY (*Pandion haliætus*, L.).

The Fishing Eagle, bred in Galloway at, at least, two places, Loch Skerrow and the Glenhead Lochs, till about 1860.

THE TUFTED DUCK (*Fuligula cristata*, Leach).

This bird comes on my list now as a relief from the disagreeable task of recording so many extinct or disappearing species Always well-known as a winter visitant, the Tufted Duck was first discovered breeding within our area by myself in 1887. Since then it has spread amazingly, and there is scarcely a loch in the three counties but has a pair of them upon its surface in summer.

THE STOCK DOVE (*Columba œnas*, L.).

This species is another very welcome addition to our resident breeding birds that has arrived here quite recently. In 1876 it was found breeding in Southwick. Since then it has spread, not only over Solway, but over the most of Scotland.

THE PHEASANT (*Phasianus colchicus* L.).

According to a statement in the "Old Statistical Account," the Pheasant was introduced to the woods of Eskdale about 1790 by the Duke of Buccleuch. There was an introduction at Jardine-

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hall in 1822. John M'Diarmid states in the old "Courier" of date August 9, 1825, that "pheasants are spreading fast over the whole of Galloway, very little to the comfort of the farmers, who complain that a colony of them are as ill to keep as a hirsel of sheep."

THE PTARMIGAN (*Lagopus mutus*, Leach).

The Ptarmigan was still on our hilltops when the century came in. It survived till about 1822. In the "Zoologist" for 1887 I have gone pretty fully into the history of the last survivors, and all particulars may be obtained therein.

THE WOODCOCK (*Scolopax rusticola*, L.).

Nowadays the Woodcock remains, and breeds here, in no scanty numbers. It is the general belief that it did not do so during the first two-thirds of the century. At the same time, some are of opinion that, from insufficient observation, the fact of the Woodcock remaining to breed was overlooked. I have seen an egg of the Woodcock that was taken in Newabbey parish so long ago as 1828.

THE LITTLE GREBE (*Podiceps fluviatilis*, Tunstall).

This is another addition to our breeding residents. It was first noted nesting at Falbae Loch, in Parton, in 1876, and since then it has been noticed in several other localities. When Robert Gray wrote his "Birds of the West of Scotland," he remarked on the curious fact that the Little Grebe had not been known up to that time to breed here.

REPTILIA.

THE ADDER (*Pelias berus*, L.).

Although far from being at all scarce yet, there is no doubt that the Adder has greatly decreased from its former abundance. Drainage and reclamation have destroyed many of its haunts. The late Mr Thomas Wilkin informed me that, when a large portion of his farm of Tinwald Downs was reclaimed from Lochar Moss, a note of the Adders killed during the progress of the work was regularly kept. The average was 40 per acre.

PISCES.

THE COMMON COD (*Gadus morrhua*, L.).

Does not now come up the Solway Firth in the great quan-

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tities and huge size that once arrived there in the winter months. Up to 1855 and 1856 their visits were annual, but after that they gradually dwindled away. Now, as a rule, only codlings are caught, and the large, mature fish very seldom indeed.

THE ROACH (*Leuciscus rutilus*, L.).

Within the last half-dozen of years, Roach have been found plentifully in the Cargen water. Probably they originated from an introduction to the Terregles ponds. The species is at best very local in its distribution, and any extension is of considerable note.

THE MINNOW (*Leuciscus phoximus*, L.).

The Minnow was introduced into Glasserton parish, in Wigtownshire, according to a note by Sir Herbert Maxwell in the Annals of Scot. Nat. Hist., "some years previous" to 1892. It does not exist anywhere else in Galloway west of the Cree.

THE SALMON (*Salmo salar*, L.).

Salmon are enormously less in the Solway rivers than formerly. Both in the rivers and in the estuaries, the early, or spring, fish (should these not rather be termed the "latest" fish of the previous year's run?) are almost of rare occurrence now when compared with a period of half a century ago. I believe firmly that as much salmon reaches the public as ever, but whereas the captures in the rivers have decreased greatly, the salt water catches have gone up correspondingly. The Solway rivers are naturally late waters, and their tendency has been for many years past to become later as time goes on. The process is a slow one. Whether the change is climatic, or is caused by the constant annual taking of the earlier runs, can hardly be said to be decided. Like many other observers, I am of opinion that it is to be attributed to the latter cause.

THE SMELT (*Osmerus eperlanus*, L.).

Hardly known as fresh water fish nowadays in at least the Esk, Annan, Nith, and Urr. They have greatly decreased, also, in the estuaries. I have been favoured by Mr Hugh Kerr, Dalbeattie, with the loan of an old account book kept by his grandfather, when tenant of the Munches fishings in the River Urr. In 1840 no less than 1800 lbs. of "Spirlings" were taken from

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these waters. A little practical combination might easily reinstate the Smelt in its former abundance, as witness what has been done in the Cree within a remarkably short period.

THE GRAYLING (*Thymallus vulgaris*, Nilss).

Shaw, of Drumlanrig, put 2000 Grayling ova into a stream in the Drumlanrig policies, leading into the Nith, in the spring of 1857. The following year breeding fish were introduced into the same river by Lord John Scott. Now the species swarms in all suitable localities. A few have been taken in the upper reaches of the Annan, but none in the lower waters. I am unaware when, or by whom, they were introduced there.

THE ANCHOVY (*Engraulis encrasicholus*, L.).

The Anchovy came into the Solway waters in 1889, appearing first in Fleet Bay; the following spring they were captured near Annan, and it was soon ascertained that the whole firth was full of them. Since then their continued presence has been noted. It will be interesting to watch whether the Anchovy remains permanently off our coasts.

THE HERRING (*Clupea harengus*, L.).

Probably never a summer passes during which Herring do not visit our firth. In the early half of the century they were here in such immense shoals as we never hear of now. The public memory is proverbially short, and it has been almost forgotten that so comparatively recently as 1848 the Herring shoal touched the Dumfriesshire shore, and most of the inhabitants of that part of the coast left their usual occupations and engaged in catching and curing, while those fish that had got stranded on the banks were carted away by the farmers for manure. This was more particularly the case in Caerlaverock parish, but at the Brow and Priestside the people were equally busy, and this state of matters lasted from the beginning of September till Hallowe'en. The English trawlers plied their vocation off the Borron Point, and some of them used to sell their catch daily at the Dockfoot. In the several years that succeeded Herrings were nearly as abundant in the firth. 630,000 were taken in a single night in October, 1850, off Maryport, and the fishing culminated in 1852 with the greatest catch of the century. In October and November of that

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year the shoal lay in the channel from the Blackshaw to the Lightship on the Cumberland side, and nearly 100 boats were engaged in the fishing. It is a matter of interest that the Herrings are recorded to have spawned that season in local waters. The Maryport boats alone realised upwards of £10,000 from the season's work. The time may again come round when Herring will visit the firth in their old numbers, but they are not likely to do so until the banks and channels get back to the condition they were in half a century ago. That may never happen again, if my idea turns out to be correct, that the Solway firth is silting up at a comparatively rapid rate.

Three more species of fish ought to be mentioned. These are the American Charr, the Black Bass, and the Rainbow Trout. They have been introduced for more than a decade now, and seem to have thriven. Individuals of each of them have been taken at considerable distances from where they were originally put into our waters.

21st December, 1900.

The Rev. WM. ANDSON in the chair.

New Member.—Mr Pearson of Luce, near Annan.

Donations and Exchanges.—North American Fauna, No. 19; Results of a Biological Renaissance of the Yukon River Region; Coleoptera of Reigate, Part III., Staphylinideæ, by John Linnell.

The Secretary submitted certain papers received from a gentleman in Dunscore Parish:—(1) A notice addressed to James Grierson, Esq., Palgonar, intimating that on account of the cholera in Dumfries (1832) business for the Michaelmas Head Court would be postponed. The notice was covered with MSS. jottings regarding wonders, freaks, &c., and among others was a note of the prolificity of a Russian peasant, from the Scots Magazine, 1755, which corresponded with a similar account of Russian prolificity published in the "Lancet" in 1857, and in Gould and Pyle's Anomalies of Medicine; (2) A letter regarding the second

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incoffining in 1817 of Lady Betty, daughter of Hugh, Earl of Lowden (? Loudoun), her death having occurred in 1771; (3) Two old hotel bills from Carlisle and Ramsey; (4) Lines said to be by Burns on the death of Paine; (5) Newspaper notice of death of Mrs Mary Ann Lowden (aet. 88) at Stank of Bankend, endorsed "last surviving sister of Paul Jones;" (6) A ticket for Leith stage coach.

Communication.—The Secretary read a paper by Dr Chinnock, London, on Ptolemy's Ireland, for which Dr Chinnock was accorded a hearty vote of thanks.

Mr Service, seconded by Mr Thomson, moved "That the "Society consider the advisability, in conjunction with other "kindred societies, of asking the Government to issue a Commis- "sion to prepare and publish a third Statistical Account of all "the Scottish Parishes." This was, after discussion, unanimously agreed to, and a Committee, consisting of Messrs Service, Thomson, Barbour, Ballantyne, Moodie, Dr Ross, and Mr B. M'Gowan, was appointed to take any steps that might be considered necessary.

18th January, 1901.

Mr Robert Murray, V.P., in the chair.

New Members.—Colonel Beaufin Irving of Bonshaw; Mr Andrew C. Penman, Coachbuilder, Dumfries.

Donations and Exchanges.—Proceedings Berwickshire Naturalists' Club, XVII., Part I.; the Session Book of Bunkle and Preston, 1665-1690; Transactions of the New York Academy of Sciences, Vol. XII., Parts II. and III.

Exhibits.—Mr Arnott, Carsethorn, exhibited four Edward I. Pennies and a Groat of Edward III.; the Rev. W. Andson exhibited a pamphlet, dated October, 1792, on the opening up of a Cairn in the Parish of Urr, in which was a curious account of what the writer believed to be an ancient mode of sepulture

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Miss Cresswell showed seven photographs of snow effects taken in the neighbourhood of Dumfries.

COMMUNICATION.

The Meteorology of 1900. By the Rev. WILLIAM ANDSON.

Report of Meteorological Observations taken at Dumfries during the year 1900.

Lat., 55° 4′ N.; Long., 3° 36′ W.; Elevation above sea level, 60 ft.; distance from sea, 9 miles.

1900.	BAROMETER.				S.-R. THERMOMETER. In shade, 4 feet above grass.					RAINFALL.			HYGRO-METER.		Dew Point.	Relative Humidity. Sat. = 100.
Months.	Highest in Month.	Lowest in Month.	Monthly Range.	Mean pressure of Month.	Highest in Month.	Lowest in Month.	Monthly Range.	Mean Maximum.	Mean Minimum.	Mean temper. of Month.	Heaviest in 24 hours.	Amount for Month.	Days on which it fell.	Mean Dry.	Mean Wet.		
	In.	In.	In.	In.	Deg.	Deg.	Deg.	Deg.	Deg.	Deg.	In.	In.		Deg.	Deg.	Deg.	
Jan.	30·395	29·233	1·162	29·827	52·3	23·3	29·0	44·	35·1	39·6	0·43	3·89	26	39·2	33·	36·4	90
Feb.	30·250	28·800	1·450	29·528	49·	6·5	42·5	39·4	28·4	34·	1·02	4·07	15	35·8	34·6	33·8	86
Mar.	30·637	29·223	1·414	30·068	56·	21·6	34·4	46·	32·1	39·	0·12	0·55	6	37·7	35·0	33·7	82
April	30·533	29·165	1·368	29·895	71·	27·8	43·2	55·7	37·5	46·6	0·55	2·77	16	45·8	42·8	39·2	78
May	30·440	29·240	1·200	29·988	70·	32·6	37·4	58·9	43·	51·	0·84	3·21	13	50·2	46·	41·4	73
June	30·460	29·506	0·955	29·935	77·5	41·7	35·8	66·	49·8	58·9	1·25	4·22	19	59·1	54·2	50·4	76
July	30·380	29·483	0·897	30·002	76·	42·	34·	69·1	53·5	61·6	0·51	3·28	20	61·	57·5	54·4	80
Aug.	30·447	29·200	1·247	29·948	81·3	43·3	37·7	65·6	49·5	57·6	1·39	6·30	20	57·	54·2	51·6	83
Sept.	30·551	29·321	1·230	30·042	74·	35·	39·	64·5	46·3	55·4	0·98	3·11	15	54·4	52·2	50·	85
Oct.	30·500	29·181	1·409	29·828	69·	27·	35·	54·4	40·2	47·3	0·99	4·32	19	47·	45·4	43·6	88
Nov.	30·525	29·247	1·278	29·701	60·	27·	33·	48·3	33·3	40·6	0·90	4·09	22	42·8	41·7	40·4	90
Dec.	30·291	28·615	1·676	29·007	54·5	31·8	22·7	48·7	40·6	44·6	0·80	7·07	27	44·1	42·8	41·4	88
Year..	30·637	28·300	2·337	29·363	81·3	6.5	74·8	55·2	41·2	48·	1·39	47·06	218	47·7	45·4	42·8	83

WIND—

	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Var. or Calm.
Days ...	18½	48	29	31	31½	80½	64½	41½	11

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BAROMETER.—The highest reading of the barometer during the past year occurred on the 13th March, when it rose to 30·687 in.; the lowest was recorded on the 19th February, when it fell to 28·300 in. The annual range was thus 2·387 in. The mean pressure (reduced to 32 deg. and sea level) was 29·863 in., which is very near the average. The months in which the highest mean pressures occurred were March, July, and September, in all of which the mean was above 30 in. The lowest were in February, November, and December, which had pressures ranging from 29·528 in. in February to 29·701 in. in November. The reading of 28·300 in. in February was abnormally low, and it is worthy of note that there were no less than six days in that month—from the 15th to the 20th—during which the barometer readings were all under 29 in. Some days previously there had been a heavy fall of snow, which lay upon the ground to the depth of 10 or 11 in., and the frost at the same time had been so severe that the river was frozen over and bearing. In connection with this storm there was an extensive breakdown of telegraph and telephone wires, and much damage done both by sea and land. The only other month in which barometer readings under 29 in. were recorded was December, in which they occurred twice, first on the 20th with a reading of 28·720 in., and again on the 28th with a reading of 28·615 in. On both of these dates there was a severe south-westerly storm, by which no small amount of damage was done. That of the 20th seems to have been the worst in this part of the country and in the northern parts of Britain generally; but in the south and west of England and Wales that of the 28th appears to have wrought still greater havoc in shipwrecks and loss of life. December was, on the whole, the stormiest month of the year. After the first week there was a series of cyclones, accompanied by strong gales from the south and west and by frequent and heavy rainfalls, which made it the wettest December in the fourteen years to which my observations extend. But some of the other months also had more than their usual share both of wind and rain.

TEMPERATURE IN SHADE, FOUR FEET ABOVE THE GRASS.—The absolute maximum or highest single day temperature of the year was 81 deg. on the 12th of August; the lowest or absolute minimum was 6·5 deg. on the 12th of February, showing an

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annual range of 74·8 deg. A maximum temperature of 81 deg. was also recorded on the 15th August, but these were the only instances in which a maximum of 80 deg. and above was reached. In July the highest was 76 deg., and in June 77·5 deg. There was thus a smaller number than usual of very warm days. There were 9 days in June and 14 in July with temperatures of 70 deg. and above in the shade, but only 5 in August in addition to the 2 at 81 deg. The warmest month was July, which had a mean temperature of 61·6 deg., June was next with 58·9 deg., and then August with 57·6 deg. July was a degree and a half above average, June about average, and August nearly one degree below. The coldest month of the year was February, which had a mean temperature of only 34 deg., being fully four deg. below the mean for that month. February was in fact a month of unusual wintry severity. Not only was the lowest temperature of the year recorded in it, but there were 18 nights of more or less severe frost, with an aggregate of no less than 149 deg. below the freezing point, and a severe snow storm, as previously noted, with a strong easterly and south-easterly gale, which did much damage. The other winter months were comparatively mild. January, with a mean temperature of 39·6 deg., had several nights of frost, but none of them severe. March was cold, with some sharp frosts after the middle of the month, and a mean temperature of 39 deg., nearly 2 deg. below the mean. But November and December were both exceedingly mild, the former having a temperature of 4 deg. and the latter of 6 deg. above the average. There were six months in which the temperature was above the mean, viz., January, July, September, October, November, and December, the excesses in these months amounting to 14·5 deg. The deficiencies in the other months amounted to 8·9 deg. The mean annual temperature comes out at 48 deg., which is about half a degree above the average of 13 years. I may mention that 48 deg. is given as the mean annual temperature of Dumfries in the isothermal maps which give the lines of equal temperature. If any one has a good atlas, such as Bartholomew's Pocket Atlas of Scotland, and will look at the isothermal map which it contains, he will see that the line of 48 deg. starts from somewhere about Newcastle, then passes in a north-westerly direction to Dumfries, then west from Dumfries through Wigtown, then in a northerly direction towards Arran and the Isle of Bute, then easterly

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towards Glasgow and Falkirk to Stirling, and from Stirling west again towards the Atlantic. The mean annual temperature has been as high as 49·5 deg., and as low as 46 deg. I make the average to be about 47·5 deg., but possibly a longer period of observation might give a higher mean. We cannot fail to observe, however, that the mean annual temperature of 48 deg. in the past year, which is fully up to the average or a little above it, is not due so much to a warm summer as to the unusual mildness of several of the winter months.

RAINFALL.—The most outstanding feature of the meteorology of Dumfries during the past year was the excessive rainfall by which it was characterised. The total amount which fell from January to December was no less than 47·08 inches. The average of twelve years was 36·20 inches, so that the record for the year was in excess of the mean by nearly 11 inches. This is the heaviest annual rainfall recorded at this station since observations were begun in 1886. The only approaches to it were 42·81 in. in 1897 and 42·92 in. in 1891, both of which are more than 4 inches less. The year as a whole was remarkable for its frequent and heavy rainfalls, almost the only exception among the months being the weather of March, which was abnormally dry, showing a fall of no more than a quarter of an inch, with 6 days on which it fell. The wettest month was December, which had nearly double the average, 7·07 in., as compared with about 4 in., and 27 days on which it fell. It is worthy of note that this was the wettest December of the 14 years to which the observations extend. The next wettest December was in 1891, which had a record of 6·24 in., and twice it had 5 in. August was also an extremely wet month, having a record of 6·30 in., and 20 days on which it fell. But in fact all the months except March, which was exceptionally dry, and July and November, which had about the normal quantities, showed an excess above the mean. The number of days on which precipitation of rain or snow took place to the amount of not less than one hundredth of an inch was 218 (rain, 208; snow, 10, chiefly in February), which is considerably above the average. As the result of such frequent and heavy rainfalls the river Nith was frequently in flood. In August and December it was more or less flooded during the whole of these months, the gauge at the New Bridge showing not unfrequently

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depths of from 6 to 8 and even 9 feet. And after the melting of the snow in February, with a heavy rainfall of more than an inch, it must have been 10 feet. Even in April, May, and June there was a good deal of flooding. I need hardly add that the result of such a wet year, along with the excess of 4 inches in 1899, will be to raise the average rainfall of Dumfries to a somewhat higher figure than that at which it previously stood. The mean of 12 years was 36·20 in. When the amounts for the past two years are added it will come out at 37·43 in. as the average of 14 years.

HYGROMETER.—The observations of the dry and wet bulb thermometers were taken twice every day, at 9 A.M. and 9 P.M., and under the same conditions as those of the maximum and minimum thermometers—that is to say, in the Stevenson screen and four feet above the grass. The mean of all the dry bulb readings for the year was 47·7 deg., very nearly the same temperature, it will be observed, as that of the year, which was 48 deg. The mean of 48 deg. was obtained by adding the daily maximum and minimum readings and dividing by the number of observations—the hygrometer mean by adding the daily morning and evening observations and dividing as before—and the result is that there is only a difference of three-tenths of a degree between the means obtained by these two methods. This is a practical confirmation of what is often stated in meteorological treatises, that the mean temperature of day, week, month, or year may be ascertained by either of those methods with almost equal accuracy. The mean of all the wet bulb readings for the year was 45·4 deg., showing a difference of 2·3 deg. This brings out the temperature of the dew point for the year at 42·8 deg., and the relative humidity (saturation being equal to 100) at 83. The greatest humidity was in January and November, when it was 90, and the next greatest in February, October, and December, when it was 88. The months in which the least humidity was recorded were May and June, which were represented by 73 and 76.

THUNDERSTORMS, &C.—Thunderstorms were not frequent during the year, but I have noted five occasions on which there was thunder and lightning, viz., three in June, on the 11th, 22nd, and 23rd; one in August, on the 21st; and another on December

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2nd. Of these that of the 21st August was the most severe, and lasted from 7.15 to 8 p.m. I have also noted thunder without lightning twice, once in July and again in December. There might have been more than these, but they did not come under my observation. Lunar halos were not unfrequent. I noted two in January, two in February, three in March, one in April, four in September, two in October, two in November, and one in December—17 in all; also hail showers twice in April, once in June, and once in December.

With regard to the wind observations, the table shows that, as usually happens, the south-westerly was by far the most prevalent. It blew on 80½ days. The next was the westerly, which blew on 64½ days, and if we add to these the southerly, which had 31½ days, and the south-easterly 31, we have a sum of 207½ days, considerably more than half the year, on which the direction was south-easterly to westerly; while the northerly and easterly, including the north-westerly, had only 147 days, 11 being calm or variable. The prevalence of these southerly and westerly winds during the winter months of January and December supplies the explanation of the extreme mildness of these months, which has been exemplified during the past year as often before. In January last, for example, there were 21 days on which the wind blew between south and west, and in December there were 23. These are the winds, however, which at the same time bring clouds and rain in the greatest degree. Hence in January we have a record of rainfall above average, and 26 days on which it fell, and in December a record of over 7 in. and 27 days on which it fell; while January had only five nights on which the protected thermometer fell to and slightly below the freezing point, and December only 3, with exceedingly slight frosts.

Mr James Watt moved a vote of thanks to Mr Andson for his paper, remarking that it was to the honour of Dumfries that they had in Mr Andson one of the most accurate observers for the Meteorological Society.

THE EFFECTS OF WEATHER ON HEALTH.

Dr Ross supplemented Mr Andson's paper with some interesting observations. With regard to the rainfall, he pointed

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out that Messrs Bartholomew, whom Mr Andson had referred to, had published in their atlas a rainfall chart, and in the case of Dumfries there was a distinct line that came up from the east side of Criffel, up by Carsethorn, across again by Dumfries, and then down the other side of the Solway and across the county, showing that the rainfall was much less on the Solway shore than in parts of the country north of the line. He had obtained a record of the rainfall during the past year at Dumfries, Maxwelton, Glencrosh, Burnfoot, Ewes, Drumlanrig, and Ericstane, and he made out the average of these seven stations to be 55·4 inches—a very high record. The highest record of all came from Ewes, 445 feet above sea level, where the rainfall was no less than 67 inches. Glencrosh came next with 62 inches, and Ericstane had 58·88 inches. Drumlanrig had had it wetter than for some time past—53 inches, whereas there was a time when the rainfall was very light, approaching to about 30 inches one year. Of course the returns brought out December to be the wettest month at all the places, March appearing to have been the driest in the year. The record for Dumfries for that month was about a quarter of an inch, and in all the other places the rainfall amounted to less than one inch, with the exception of Ewes, where it was 2·2 inches. It was interesting to observe the mortality statistics with regard to the meteorology. The death rate for the year throughout the county, including the burghs, with the exception of Dumfries, was something like 17·443 per thousand per annum, the monthly death rates ranging from 28·97 in February, a cold and inclement month, to 12·520 in October, which, though a wet month, was fairly mild. February, which showed the highest total death rate, showed also the highest from tubercular diseases and from nervous and circulatory diseases. January, he supposed as the result of the wet in the previous December and because of the influenza so common then, showed the highest death rate from respiratory diseases—4·858—that in January being 4·859. A rather interesting question was discussed at some length in the *Scotsman* the other day by a writer in the science notes as to whether mild winters were necessarily unhealthy winters. The mild winter, such as this one had been, got some support from statistics. He was working out what he might call the expected deaths for certain months of the year, and when working it out for the last quarter, based upon the statistics for the county and its burghs,

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excluding Dumfries, he found that the expected deaths during December, based upon the previous five years' statistics, would be 79, whereas the actual number of deaths was 90. So that, though December was a warm month, yet there were 11 deaths more than would have been expected from the records of the previous five years. These figures, however, were too small to argue from, and when they took larger figures they found that as a general rule where they had mild winters, even though they were very stormy, they had a decrease in the death rate and also in the death rate from respiratory diseases, and to a certain extent in the deaths from nervous and circulatory diseases. He thought the mild winter did seem to have an influence upon the death rate to such an extent that they might say that a mild winter was not necessarily an unhealthy one, the reason being that it did not press so hardly upon people who were naturally weak. Another curious point that the figures brought out was that the death rate from consumption or phthisis was the lowest in December, which would tend to support the doctrine that phthisis was not altogether a question of climate, and it was not altogether necessary to send away our consumptives to a milder climate if they were put under suitable conditions at home.

On the motion of Mr Thomson, Dr Ross also was accorded a vote of thanks.

15th February, 1901.

Mr ROBERT MURRAY, V.P., in the Chair.

New Member.—Mr Robert Carruthers, F.I.C., Kirkbank, Dumfries.

Donations and Exchanges.—Proceedings of the Academy of Natural Sciences of Philadelphia, 1900, Part II., March-April. U.S. Department of Agriculture—Laws regulating the transportation and sale of Game. Proceedings of the Canadian Institute for January, 1901. Stirling Natural History and Archæological Society—Transactions, 1899-1900.

Exhibits.—Mr S. Arnott, Carsethorn, showed plants mounted by a new method, which preserved the colours, from Herbarium

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Analyticum (Buysman); Tropæolum majus; Lespedeza bicolor; Olearia ramulosa; Torenia Fournieri.

The Rev. W. Andson referred in suitable terms to the death of the Rev. T. H. Thomson, Hightae, who had contributed valuable papers to the Society while a member. He had an extensive knowledge of ecclesiastical antiquities, and especially of Covenanting times. Mr Andson moved that an expression of the sense of the Society's loss should be entered in the minutes. This was duly seconded and agreed to.

COMMUNICATIONS.

I.—"*Some Observations on the Variation of Plants under Cultivation.*" By Mr S. ARNOTT, Carsethorn, Kirkbean.

SUMMARY OF INTRODUCTORY REMARKS.

In the introductory remarks the writer referred to the importance and interest of the subject as bearing upon the evolution of plants in the past. It was pointed out that, while the variations of plants could be studied from those growing in a wild state, cultivation afforded a better means of doing so, inasmuch as the plants were more under regular observation, while the greater facilities for natural and artificial fertilization and cross-breeding afforded opportunities for the appearance or artificial production of variations which could not exist in a wild state, where fewer allied plants grew together.

Attention was also drawn to the variations in form, colour, and size of flowers which could be observed among our native plants when these were numerous in any habitat. It was also stated that the writer had endeavoured, as far as possible, to give the results of his own observation and knowledge in preference to drawing upon the published work of those who had written upon the subject. It may be mentioned that the Mendelian theory, so far as it affects the subject, has not been overlooked, but that the author is not at present prepared to consider it as beyond grave doubt.

COLOUR VARIATION.

I shall begin with colour variation, as being among the most noticeable of the changes we find among flowers.

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If we accept, as I suppose we are bound to do, the theory that the flower is merely the modification of the leaf of the plant, we are almost irresistibly forced to come to the conclusion that every colour to be found among flowering plants can be produced in any other genus or species. Daring as this conclusion may seem when we consider the colour limitations which exist at present in some plants, I think we can hardly escape from this conviction, distant as may appear its realisation in the case of some genera.

Let us take, for example, the Galanthus, or Snowdrop, as a familiar plant, whose blossoms are known to all. Its general colours are white and green. There is a form which may either be a reversion to the primitive flower or some survival which has not been subject to precisely the same influences. This has its flowers almost entirely green. There are other Snowdrops, again, which have only the inner segments almost entirely green, and which might possibly be looked upon as representing another stage in the progress of change in colouring. The normal Snowdrop, as it is known in this country, has white flowers, with a few green interior markings only, and with a green ovary. But there are others still, which are almost free from these green markings, and are really all pure white, with the exception of the ovary. There is said to have been a Pink Snowdrop, though the tales about it seem rather apocryphal. Yet it would be rash to assert that such a flower was never in existence, and it would be unsafe to say that such a thing is incredible for the future. We have, however, in the Snowdrop with yellow markings and a yellow ovary, a witness to the chances of further variations. It is true that we have not yet fixed this colouring in the seedlings, but that it can be done is almost a certainty, and there is really little reason to doubt the possibility of extending the yellow of the markings and ovary to the flower as a whole. That this is not impossible even with these flowers, which are, as it were, not so high in the evolutionary scale as others, may be seen from the Narcissus. Whether the Narcissus was yellow or white when it made its first break from the presumedly original green we can only conjecture, but we know that it is now giving us a wide range of colouring, and that a Scarlet Narcissus is within measurable distance. The narrow saffron margin round the cup of some flowers has deepened into scarlet; the cup itself has been induced

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to share this colour; and in lately produced flowers the outer segments are now tinged with a deep hue, which leads to the goal which some desire.

One has selected these examples as being seasonable, and as offering you an opportunity of thinking of them when viewing the flowers at home. In a further observation or two upon another phase of the subject of colour-variation I shall take as illustrations the common Scilla of our woods—the Scottish "Craw-tae" and the English "Blue Bell"—Scilla nutans, and the popular Hyacinth, so generally grown in glasses or pots—Hyacinthus orientalis. I do this to show what I take to be the case, that flowers which are generally blue in a wild state have as a rule a greater tendency to produce colour variations than those which are white. The Scilla referred to may often be found giving not only white, but also pink, flowers in its native haunts, although, let it be noted, these sports do not seem to occur so freely on some soils than others. In cultivation one finds that many more shades can be produced. From a pink form of Scilla campanulata, a Spanish Squill closely related to our native Scilla, I have self-sown seedlings which give me many shades of blue, lilac, white, and pink. The original of our cultivated Hyacinthus orientalis is blue, but cultivation and selection of seedlings have given us reds and yellows of more or less brightness. We have, as yet, no yellow form of Scilla nutans, though one sees no reason why it should not be produced. Scilla sibirica, another little garden plant, was only known for years as a blue flower, but a few years ago a white variety appeared. A friend of mine, who has been working on bulbous plants with much success, from the seed of one solitary bloom of pinkish colour which appeared on a spike of which all the other blooms were blue, hopes to raise a pink variety.

While, as a rule, it seems more common to raise white forms of coloured flowers, there are many instances of white-flowered plants yielding seedlings with coloured blooms. Thus the common wood Anemone gives in some places plants which have blue flowers; and purple and rosy coloured forms are not at all rare.

In some families of plants the desired variations of colour have been practically secured, though progress has often been slow. A blue Primrose is now an accomplished fact; though a true blue Rose has yet to come. In trying to secure this an

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eminent raiser produced one with true magenta coloured petals. One could go on with such illustrations of what is, perhaps, the aspect of my subject which will appeal to more than any other. Not less worthy of notice, however, is that connected with the

DOUBLING OF FLOWERS.

I suppose that, according to strict rule, a double flower ought to be looked upon as a monstrosity, just as one might be expected to look upon some of the prodigies in Barnum and Bailey's show. If we assume the sole object of the flower's creation is to ensure the continuation of the species, we must adopt this view, but if we apply the same doctrine to other animated things than to those belonging to the vegetable world then we find ourselves on a precarious footing indeed. In nature there are many checks to over-production of life, and if these take a form which is of a pleasing kind, why set it down as a monstrosity? It is singular, however, that we have a much greater proportion of double flowers and those which depart from the normal form among the seedlings which are slow of germinating and are weakly at birth. If, for instance, any one will sow seeds of double Carnations, it will be found that the plants which are the first to appear, and which grow most vigorously, are largely composed of single or inferior flowers. By the way, some plants which give double flowers have a curious way of securing that they should not become extinct. The double form of the common Lady's Smock produces little plantlets on some of its leaves, while the single one does not.

Of course we are largely at sea as to the causes which bring about the production of double flowers on plants. One would naturally think that the more vigorous the plant the more likely it would be to give double blooms; while the contrary is usually the case. It has been observed, however, that anything which tends to create a disturbing element in the natural course of the life of a plant is a powerful factor in making a change in its character or, more particularly, in its progeny. Various plans are adopted to secure such changes as we speak of. A very experienced gardener, who has been very successful in raising new plants, told me that when he was saving seeds of Stocks he always saved them from the side spikes, the central one being pinched out early. He said that the seeds saved from the central

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spike, always stronger than the side branches, gave a much larger proportion of single than double blooms. Some of the old-time florists had peculiar ideas; but in connection with this matter their practices may not have been far wrong, though they were often apparently absurd. Thus, an old Dutch florist who flourished about the end of the fifteenth century recommended, in order that Anemones with double flowers might be raised from seed, that the following should be the practice:—The tubers selected as the seed-bearers were to be kept for a year without re-planting, and the seeds they produced were to be soaked in wine, and dried before they were sown. His further directions, which had reference to the direction of the wind when the seeds were saved and the stage of the moon when further operations were completed, are too trivial for consideration, but it is possible that the disturbing element introduced into the plant by its remaining unplanted for a year, or the soaking or drying, may have had something to do with the production of double flowers. Anything which will affect the germ is likely to have the effect of introducing that element which is at the root of the many variations which are produced.

One cannot quit this branch of one's topic without referring to the curious fact that in some allied flowers the tendency to give double flowers is less pronounced than it is in the case of others belonging to the same natural order. Among the Irids, for instance, we have but few examples of double flowers. There are, it is true, in an Iris known as Iris Kempferi, instances of flowers with a few additional petals, but these are produced in plants whose parents have probably been long under a course of cultivation by the Japanese. The Gladiolus has produced a double variety, so has the Montbretia; but, so far as I can recollect, these are the only flowers of that natural order which have given these double blooms which are in existence. Why, we may ask, does not the Crocus give us examples with double blooms, seeing that it seeds so freely? There is recorded an example of a double Yellow Crocus, but no one alive seems to have seen such a flower, though it is figured in an old sixteenth century album in the British Museum. A good many other bulbous plants give us double blooms, and the Natural Order Liliaceæ gives us double Colchicums, as well as some two or three partially double Lilies. One may mention the double form of the

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old Tiger Lily, and a form of the Madonna Lily, which has some additional segments in the flower. Then, among the Amaryllis family, we have double flowers in the Snowdrop, the Narcissus, the Leucojum, and hardly any others. The process of producing a double flower from seed can, it is believed, be begun by fertilising a bloom which shows one or more additional petals with its own pollen only. From the resulting seeds the chances are that some plants will be produced which have more than the normal number of petals. The repetition of this will gradually increase the doubling until the flowers become unfertile or nearly so. One has only to think of some of our most popular flowers to see how these variations have been turned to account. Thus the Chrysanthemum of to-day, with its great double flowers of the most varied colours, is the descendant of a plant whose small white blooms with yellow discs are about the size of those of our common Daisy.

The influences of soil in doubling flowers, or in causing them to revert to the original single form, are in dispute, but one cannot but incline to the opinion that soil may cause changes of both characters.

In size of flower there is, of course, much variation both in nature and under cultivation. This is frequently the result of the soil and other conditions, climatic mainly. It may seem a bold thing to say, but it seems really difficult to place any limit within which size of flower must remain. Fortunately, considerations of good taste come into play to restrict the production of mammoth blooms. Then all sorts of odd forms in the shape and character of flowers may be produced—given a starting point. Petals may become deeply laciniated or the production of quilled florets may alter the whole character of the flower. If we think of what are known as "florists' flowers," we can form some idea only of the possibilities of variation existing in almost all flowers. Then those who are well acquainted with ferns are amazed at the possibilities of, and the actual results which have come from, variation.

BUD VARIATION.

Thus far I have referred mainly to the effects of variation from seeds, even without some of the operations and results of hybridising, which will be referred to briefly later. I desire now to touch upon what is known as bud variation. This is produced

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by a branch or shoot-producing bud giving a shoot or branch which differs from the rest of the plant in colour of flowers, colour of leaves, form of leaves, or by having a different habit of growth, such as by drooping its branches, being more erect or by some other departure from the normal. This is known as dimorphism, and is the cause of a great number of variations under cultivation. In nature many of these are lost from want of propagation. In cultivation they can be propagated and thus perpetuated. The precise cause of these bud variations seems even more obscure than those which are raised from seeds.

There is in connection with this bud variation or dimorphism a singular fact. This is, that the same "sport," as we call it colloquially, may be produced at the same time in gardens hundreds of miles apart. This is very noticeable in the case of Chrysanthemums. These, like Roses, when they sport, have generally the habit of the plant from which they have sprung, but have the flowers of a different colour. In the Rose, however, sometimes the flowers are the same as the parent, but the sport is of a climbing habit, while the original is dwarf and non-climbing. Many of our variegated and golden or white-leaved shrubs and ornamental trees are produced in the same way.

This naturally leads one to remark briefly upon the variations effected by means of grafting one plant upon another. I confess that this is a branch of my subject upon which I know very little from my own experience, as the plants operated upon in this way have nearly all been shrubs or trees. It is well-known, of course, that fruit trees grown upon certain stocks are better adapted for growing on some soils than other stocks, and that certain varieties of fruits bear better upon some stocks than others. So, also, some Roses bloom well and produce better blooms upon the Briar stock than on the Manetti, and others, which are useless on either, will do on their own roots. How far they are affected one can hardly tell, but the quality of many fruits must be influenced also by their stock. Why the Apple grafted on the Crab does not become a Crab as well is not easily explained, nor is it easy to say that the Crab stock does not affect the flavour of the Apple. We know that Cytisus Adami, which bears both purple and yellow flowers on the same tree, was produced by grafting the purple Cytisus purpureus upon a yellow Laburnum.

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One must also refer to the variation of habit in plants. In many garden plants there has been a great effort made to reduce the height of flowers so as to make them more suitable for garden purposes. This has been greatly adopted with annuals, so that there are few popular species in cultivation of which it is not possible to obtain dwarf, compact strains of seed. Now that so many perennial plants are being raised from seed the process is at work with them also. Given time and unremitting care, it is difficult to say to what length these changes might not be carried. Cultivated vegetables show their effects, and they have not reached finality any more than the flowers, which I have mainly dealt with to draw your attention to the subject, as well as because they are more familiar to myself.

HYBRIDISING.

Before turning to a few final observations, you will, perhaps, think for a few minutes upon the great question of hybridising and cross-fertilising flowers. Many as have been the changes effected in plants by their aids, one feels confident that these are but the preludes to immeasurably greater results in the time to come. If we look at the Begonia as we know it; the Clematis; the Fuchsia; the Gloxinia; the Pansy; the Viola; and the many other flowers which have been taken up by the plant hybridiser, we are amazed at the changes which have taken place within comparatively few years. Artificial hybridisation is the most powerful weapon which has been put into the hand of the gardener to effect variations in his plants, and, as yet, we have only crossed the threshold of the changes it is destined to make. It has its limits, doubtless, but when we see what it has done, and think of the hundreds, nay thousands of genera which man has never touched, we cannot but foresee that a vast prairie of work, and not a field alone, lies before us. What its limitations are we cannot yet tell. I had, last summer, a curious illustration of these in seeing through the garden of a skilled hybridiser who has for a few years been working on some plants he had taken in hand. Among them were some Liliums, among which we have a few good hybrids. One species was pointed out to me which had been fertilised about three years before with the pollen from another. Not only did the Lilies not produce seeds, but they are only gradually recovering from the disturbance caused

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to their system by the application of this pollen. Even last summer, the blooms were imperfect.

We have passed the stage when the hybridiser was deemed a sacrilegious man, who had dared to run counter to the decrees of nature. We have discovered that Nature herself is a great hybridiser, and that many of the plants we have long been familiar with are true natural hybrids. Those who are engaged on the work now are but carrying on what has for ages been done with less certainty and fewer opportunities by the insects of the air, and by the winds of heaven.

The subject thus imperfectly brought before you is full of interest to any careful observer, and also full of value to the pleasure and profit of the human race. It is complicated by many things we can never fully fathom. We cannot tell what effect the soil in which they grow; the air they receive; the water they absorb, may have upon these plants. We know that the higher the plants grow up the mountains the more brightly coloured are they than their fellows which are natives of the more lowland hills. We know that the colours of some flowers can be changed by some ingredient in the soil in which they grow, or by a solution of some chemicals in the water applied to their roots. But we cannot understand why some others are unaffected under similar conditions. Nor can we understand why the florist's Tulip remains for so long a self, or almost self, coloured flower before it assumes the markings which delight the fancier, and which made it the subject of one of the maddest manias of history. Why do not the bulbs of the same age assume their new garment at the same time? Why do some individuals "break" in a few years while others remain "breeders" for many? Problems such as these await the inquirer at every turn in the search into the mysteries of the laws which control these variations. Many of them are subject to our control, but many others seem as the "wind that bloweth where it listeth," and teach us the old lesson of our ignorance. We are still gathering pebbles by the great sea of knowledge which stretches out to infinity. Yet among them we shall find some which are precious, and which show us that many things await the observer and experimenter in such branches as this.

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II.—Mr JAMES S. THOMSON, Dumfries, read a paper on "*Water Power in relation to Electric Generation.*" Mr Thomson was cordially thanked for his interesting contribution.

8th March, 1901.

The Rev. JOHN CAIRNS in the Chair.

Donations and Exchanges.—Report of the British Association for the Advancement of Science, 1900. Annals of the New York Academy of Sciences, XIII., 1. U.S. Department of Agriculture: North American Fauna, No. 16—Results of a Biological Survey of Mount Shaster, California, by C. Hart Merriman.

Correspondence.—A letter from Mr Moreey was read asking names of parties in this district willing to undertake phrenological observations. It was resolved to submit the name of Miss Cresswell, Nunholm, and to communicate through the Rev. W. Andson with Mr Gorrie, Sorbie, and Mr Wallace, Auchenbrack, whether they would also undertake to make these observations.

COMMUNICATION.

Resumé prepared by the late Dr JAMES MACDONALD, F.S.A. Scot., of Dr Archibald's "*Account of the Curiosities of Dumfries*," and "*Account anent Galloway*," from the Sibbald MSS. in the Advocates' Library, read by Mr J. C. R. MACDONALD, W.S., Dumfries.

NOTES CONCERNING THE WRITER.

So far as I can ascertain, this "Account" has never yet been published; and, though its value is certainly not great, it derives some interest from the fact that it was written at least 200 years ago, and that its author was one of the leading medical practitioners of his day in the town of Dumfries.

It is but fair to remember that at the end of the seventeenth century Scottish Archæology was only in its infancy. Sir Robert Sibbald, for whose use the "Account" was drawn up, may be said to have been its father, and though his numerous works on the

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antiquities and natural history of Scotland have long been out of date, and are now little known, he deserves to be remembered for the untiring zeal with which he prosecuted his inquiries.

In collecting information, Sibbald sought the assistance of men of education in the different districts of the country. Nicholson in his Scottish Historical Library has given us the names of the most prominent of them. From this source we learn that from Dumfries he enlisted the services of Dr Archibald, from Galloway those of the Rev. Andrew Symson. At Sibbald's death the great part of his MSS. collections was purchased for the Advocates' Library, where they are preserved. Among them are copies, and in some cases perhaps the originals, of most of the district reports on natural history and antiquities. Archibald's as well as Symson's are contained with several others iu a small quarto volume, in which they have been very neatly engrossed by the same hand, apparently about the close of the seventeenth century.

Dr George Archibald, who, as just explained, was Sibbald's correspondent in Dumfries, was the son of the Rev. Robert Archibald, minister of Dunscore from 1651 to 1662, and one of the four hundred uncompromising Presbyterians who, on the re-establishment of Episcopacy by Charles II., gave up their livings in the Church of Scotland rather than do violence to their convictions. Mr Archibald died in Edinburgh in 1688. About that time his son settled in Dumfries as a medical practitioner, and dying there in 1715, was buried in St. Michael's Churchyard. "Resting on the east side of the sacred edifice, near the north-east corner," writes Mr M'Dowall ("Memorials of St. Michael's," p. 371), "we discover a large loose slab, which commemorates George Archibald. Neighbouring stones press upon the relic so closely as almost to veil it from cursory observation; but, neglected though it now is, it must when entire have presented an imposing appearance with its carved escutcheon and richly-chased border. It might with great propriety be removed from its obscure position, and placed near the kindred memorials of his mother and his second wife, where room for it could easily be found, below the middle window of the church on the south side. This 'Docter of Medicine,' as he is termed in the inscription, was one of many distinguished medical men produced by the burgh both in ancient and modern times. . . . Crossing the stone in oblong fashion is the following brief epitaph: Clarus in arte fuit medica, pius æquus amator

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doctrinæ et morum, lepidus, cunctis-que benignus; which may be thus translated: He was distinguished in the medical profession, pious, upright, a lover of learning and morals, amiable, and kind to all." Mr M'Dowall's suggestion that the stone should be removed from "its obscure position" has not yet been followed up. It still remains as he saw it.

So far as can be gathered from the memoranda available, it was Dr Macdonald's intention to give the Society not exactly a mere transcription of Dr Archibald's "Account," but to eliminate such of the "curiosities" as are only calculated nowadays to excite a smile, and to present the remainder in the precise words of the text, with expository notes of a character such as might have made the paper one of real value to all interested in the antiquities of the district. The notes, however, are so fragmentary, and my own scholarship is so sadly at fault, that I have found it quite beyond my ability to carry out the original plan. I must, therefore, beg the Society to be satisfied with the "ipsissima verba" of the "Account," and I have only to add that in order to ensure accuracy, I have myself verified Dr Macdonald's transcription by carefully comparing it with the manuscript in the Sibbald collection. It might be well that I should make two further remarks of a prefatory nature. The first is that the "Account" is apparently addressed to a mutual friend of Sibbald's and the writer, who had been employed by the former as a medium of communication, and that it was drawn up and transmitted in two sections. The second is that although the "curiosities" described are said to be "at Drumfriess," Dr Archibald tells us very little about the town, but makes frequent and erratic excursions into the surrounding country.

DR ARCHIBALD'S PAPER.

In answer, says the manuscript, to the Doctor *(i.e.*, Dr, afterwards Sir Robert, Sibbald) his advertisement and your desire, I must say—"Messis est vobiscum parca, sed palleas colligamus" [the harvest is scanty, but let us collect the straws].

As for the nature of this country, yourself can sufficiently inform the Doctor, and also as to the product, which you know to be wool and cows; fish and tallow for Bordeaux exchanged there with pruns, wine and brandy; skins and hides for Holland. Our trading is with France, Holland, and Dantzich.

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I have not observed anything worthy his notice cast up from our narrow sea.

Near this, or within ten miles in the Stewartry of Galloway, are silkworms, bastard amethysts, limestone, pearls, and (as is thought but not yet found) lead and coal.

In Nidesdale are ancient houses such as yourself can inform; for nothing is here which is not ancient enough, and few things new. You'll inform concerning the ancient houses and lochs, such as Closeburn, &c.; woods, such as Tinwald, Mouswald, Carlaverock, Dardarroch, &c.

As for Drumfriess, you also sufficiently know it; it is so called from the Freez-well beside it. It's ruled by one Provost, three Bailies. Its revenue is reckoned betwixt five and six thousand merks. You'll inform of the old Grayfrier Church, where the Cumin was killed; of the Castle, bridge, church, new exchange, our large granary house, which though old is still new work; our stately cross, large street, and pleasant situation by and alongst the River Nith.

Just beside this town, upon the side of the river, hard by the Castle of Cumin, in the place called Castle dikes, once well fortified with mounts and ditches, but now ruinous, springs a fountain most strongly all summer, harvest, and spring, though never so hot and dry, which precisely about Hallow mass (as is generally reported) dries up (though the winter were never so rainy) until the spring.

Within four miles I remember to have seen a spring, which at that time was dried up, wherein may be digged abundance of an earthy substance, like litharge of gold, unctuous and greasy, which, when the people mix it with water, casts up a splendent, golden, oyly-like colour, wherewith they colour their doors and windows.

Within ten miles is a well whence the neighbouring people digs an earth which they call Bleck. It's black and thick (as I remember), *instar Limi Argilasi* [like the clay of potter's earth]. Herewith they colour much of that cloth they call Galloway grays.

I did here see a boy five or six years old (living within three miles of this place) out of whose joynts, shoulders, buttocks, fingers, and toes did grow little horns, like the typhi or young horns of a goat, black and hard; which, when they came to the

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length of two inches, did sorely trouble him and fall off, others succeeding thus every half-year.

In a moss which lies upon the east side of this town, seven miles long and one mile broad, did I have the leg of a child cut off (as appears) by the patella. It's of a stickish like substance, the tibia and fibula inhosened in a casement like the black bark of a tree, which is in place of the muscles tibiaeus, peronaeus, &c., all the interossean muscles of the foot, toes, ancles, nails, and all other parts exactly well proportioned as anything Nature can efform. "Num fuerat lutum instructum animal principio integrum, vel deficiens animal procedens: an fœtus humo commissus, et a bituminoso calore conservatus et processu temporis quasi transmutatus dignus est D. D. Sibbaldo nodus, ad cujus augusta subsellia hoc ipsum reclino." [Had the formed clay been an animal originally entire or an immature animal in process of development? Was it a fœtus buried in the ground, preserved by the bituminous heat and in process of time transformed as it were? This is a problem worthy of D. D. Sibbald, on whose august judgment seat I leave the thing itself.]

As for Annandale, the supreme governour, steward, and lord thereof is the Earl of Annandale, an ancient Family and Wardens of the Border. Wherefore their arms are supported with a saddléd horse and a crowned lion carrying upon the crest a flying spur. The motto is "nunquam non paratus" [never unprepared].

In this country are the wells of Moffat, encircled with a wall by the foresaid Family.

His houses are Lockwood and Newbie; the one desirable for strength, the other for pleasure; that for pasture, moss, or fire and wood, this for fish and plenty of coneys.

Here is the King's Castle of Lochmaben, famous for defending the country in the old English inrodes, strengthened by a Loch surrounding it, where the fishes called venaces and gevenaces are talked of in nowhere else in our country. They are pleasant white fishes.

Contiguous to this loch are seven large lochs, all of which have the same fishes, a clear and stony bottom, with a tossing surge and noise before a storm blow. The fishes resemble whitings in colour, taste, and figure, being only a little more dry.

Besides this castle is a moss which giveth peits [peats] for fire, most white, yielding a bright shining fire and flame.

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Here is also in this county St. Ruth's Church, called Ruthwell, where lies a monument broken in two pieces, which was a pillar quadrangle of stone reaching from the bottom of the church unto the roof, and in it cut the portraiture of Our Saviour with beams encircling His head, and beneath His feet, "Supra serpentem et draconem conculcabo" [I will trample the serpent and dragon under foot], and underneath is the effigie of Peter and Paul, beneath whom is "Petrus et Paulus fregerunt panem in deserto" [Peter and Paul broke bread in the wilderness]. Many other draughts and letters, Greek, Latin, and Hebrew, have been there, but time and ill-using hath abrased them.

At this place the people have a way of making salt from the sea sand, which they gather up in summer and prepare in winter. If the Doctor desires to know the way they prepare it I shall give him an account.

Upon the top of a great height is a Tower called the House of Repentance, some eight miles from the King's Castle and fifteen from the English border, where beacons being placed the Castle had immediately an alarm. This was seen by most of the whole country and much of Nidesdale and some of Galloway, putting them to their sudden posture of defence.

As for wells, the three shires abound with many unto which people resort, more famous from Fable than Fates; yet several of them resemble Moffat wells in colour, taste, and smell.

As for the nature of the soil and the houses, with woods and lochs, yourself knows and hath seen them.

As to Galloway, I have remitted it (conform to your last) unto Mr William Ewart, the Provost of Kirkcudbright, who will give account of what is observable and memorable, where are the most ancient monuments of this country, and many old abbaceis, as New Abbey, Dundrennan, Whithorn, Glenluce, Tungland, all very considerable; and with us are only Holywood and the church of the College whereof yourself can as well inform as I.

FISHES.

In that Castle Loch of Lochmaben are various fishes besides those two formerly mentioned — pikes, greenbacks, breams, vetches, pearches, with some others.

I will give you an account of our sea fishes with the next, being now hastened.

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In the months of June and July they take an harrow and go over the dry sands (which I have observed spangling as with shining nitre), and having raised it they rake it into small ranges or areolas, and next day (if they fear rains) they take a sled with a broad board fixed to the hinder part thereof the edge downward upon the ground, which they call the happ, and with this drawn by an horse they gather the ranges together into an heap. Thereafter, within some few days, they carry it away upon wagons drawn by eight oxen unto the coast, and there they heap it up into the bigness of a country house, which they then call the salt stalks. Thus it stands till winter, and then they form an even piece of ground upon a little ascent, either naturally or artificially so, after the form of a bed, which they oblute with clay, raising the edges high, and near the end of this bed (which they call the coach) they pierce through an hole into an hollow place digged below into the earth, called the pit, and this hole they stop. Then they carry a sufficient quantity of the salt stack and spread it over the whole coach, laying it three foot thick equally. Then they lay down upon the middle of the sand a broad turf, and upon this they pour down a sufficient quantity of sea water, which they take up from the little hollow ponds they dig within the flood mark, being there left in the ebbing, and, after eight hours' standing with the sand (which they call "blanking"), they pull out the stopple below, which is made up of oak or alder tree bark, and the water stills down into the pit, wherewith they then fill their pans, which are placed near the coach, and made of lead sitting upon a furnace. The pan is usually an ell and a half long and near an ell broad. The fire is of peits (peats), wherewith they exhale the water till the salt only remains, watching most vigilantly, otherwise their pans melt and they lose their pains. With this those people help themselves, and serve the country about them.

It is made at that place called Ruthae Vallum or Ruthwall, where that monument of stone is of which I did give account in my first, which is said to have been erected by the Saxons, having progressed no further into this country than that place, and that thereafter by Christians inscribed with sculptures and characters.

The salt is somewhat amaricant, which I suspect to be from the nitre.

On these lands, as I remember, I have seen Kali grow thick,

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and on the banks Brassica marina; upon the opposite coast, on high rocks, crithmum, called Pespire.

Fishes in this coast might be more observable if we had fishing. I give the names as here called: Salmon, crowner, keiling, sturgeon, whiting, cockle, mussel proans (which they call garnets in Holland, or garen), cleurks, which I did never see elsewhere—they are like these prans in figure, and above all things resemble the smallest and roughest of horse corn; they are clear and transparent, with a forked tail and two long cornua stretching from their head straightforward. The manner of catching them is this: In the entrance of the River Nith into the sea the poor people goes, when the sea is ebbing, into the water middle deep, two by two, carrying betwixt them a long sheet or blanket, and with one hand they hold deep beneath the water the one edge of the sheet or blanket, and carry the other upon the surface of the water; thus walking against the stream they catch pockfuls of these vermin-like fishes, and the country people hold them most wholesome and appetising, being boiled with leeks and sprinkled with salt and eaten with bread. Oysters, sole-flouks, turbot-flouk, eels sometimes three ells long or more (I have the head of one more than a large foot in length), skate or flounder, etterpyles like a small burn trout, with a large head and broad shoulders, carrying three stings on the back and one at the corner of each side of the mouth. It is a pleasant fish for eating, but its stings are so tormenting that the pricked person is scarce able to stir, but must be carried home, and after a while's pain, as three days, it ceaseth and the swelling falleth. They flat these pricks down upon their backs, and raise them at pleasure or when irritated. Skeddan, a fish so called, but esteemed an anchove. These two are found in the Annand water and Solway sands into the sea, or close by the east of Annandale's House, Newbie, where he dwells. Haddock's herring, not very much desired because they banish these other fishes a long time. Sea-adder, thornback, lamprey with a beck (beak) stretching like a whaap's, hirlings, seaneedle, which has a long beck three inches in length; its body is the length of a burn trout and much like a whiting with a forked tail, each fork an inch long, with fins and scales. Rush-fish, called so from their smell and colour, being sea-green coloured and smelling like a bundle of green rushes. There seem

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sparlings, white-flook, whereof some are a little blueish, with golden-like spots over all the skin; skatelnad, which is a little small fish an inch and a half long, shining clear as silver, which the people eat (boyled) with their bones, head, and tail. They can only endure one boyle or two. Lumps or Limps, Partons.

FOWLS.

Biltour, making a great sound in the summer evenings and mornings by thrusting her beak into the ground when she cries.

Blackcock, whereof Sir Robert Daljell hath one hanging in his hall, which is white almost all over his body.

Green plover, returning every spring in abundance and staying all summer.

Jay, called Lipper-jayes, taught to speak as exactly as any parrot.

Myresnipes (which like a Feldefare), called heatherbleet. In pleasant summer evenings they soar high in the air with a quivering voice, and are excellent meat.

I mention none else, as being ordinary, save woodpeckers.

QUADRUPEDS.

In the wood of Glenae, belonging to Sir Robert Daljell, are perfect squirrels, but never exceeding the bigness of a little rat; badgers in Galloway, which the country people catch and boil, removing their fat for aches and bruises; hedgehog, hart, and hind running wild on Galloway mountains; others in several places.

INSECTS.

The kind of grylle, focarii or pistrinarii, are here abundantly, very like cantharides.

This aranea which I have sent with its silk beside it, whereof none are to be found in our country but in this one place, which is a cove upon the seashore, environed therewith (very near) at each full tide. The persons I employed to search for them tell me that with lighted candles they crept into the little entrance, and then came into a large dark arched room, upon which here and there hang those little balls full of young, and the lady one spinning amongst or about them; nothing else to be found there within the vault.

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FOSSILS.

The earth called Bleck digged out of a pit an ell and a half long and near as broad and the depth of a pike. The country people boil alder or oak tree bark in water, making a strong ligive, and therein they boyl this also together with their cloth, which thence receives a black colour. Traditionally they report here a ship laden with iron to have sunk. The lake smells exactly as Moffat well, the sea sometimes overflowing it. The earth when taken from the place quickly spoyls and losing its black colour turneth into a clay colour unless the vessel be covered with iron or iron put into it.

I have not yet gotten that lithargick-like earth, neither the white peit (peat), but shall send them as soon as possible.

I have sent the Tibia efformata fossilis, which I desire you be pleased to send me back again as soon as you may.

I could send you that stone, which is like the Bristol stone, and another which is cornu servi fossile with signatures. I hope you will send them back again to me.

WELLS.

Here are many superstitiously used, but physical I know none save Moffat Wells in Annandale. A well in Closeburn Parish, in a moss belonging to the Laird of Closeburn; another at Torthorwald, belonging to the Duke of Queensberry; a third at Kirkbean in Galloway within a mile of the black lake in a meadow. These are used after the same manner, have the same colour, taste, and smell, but the ill-luck of a lesser fame.

Many run superstitiously to other wells, and obtain (as they imagine) health or advantage. But I know of no physical influence. Only from the deceits of that *musiotechnes* they are deceived, and there they offer bread and cheese or money by throwing them into the well.

And lately being called four miles hence to a gentleman's first child troubled with vomitings and faintings, I told him that I suspected the smallpocks and desired him not to fear. Then he told me regrettingly that some of his servants had given the child a draught of a well within a mile of his house which the sick parties' friends fetch there to the sick, and having given them of it to drink they reckon that they shall live if they do not vomit it, but if they vomit they must dy.

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I went and viewed that well at Castledykes within a mile of this town, and saw it yet running. But it's confirmed by all who know it, and particularly one to be believed who dwelt there long, told for confirmation that he knew it these 40 years and never knew it run or spring in the winter, though never so rainy, and in the summer never dry up in the greatest drought. It is a pleasant and plentiful spring in summer, as I have observed.

And within half a mile (or less) of it upon the other side of a little height is another well which dryes up for three or four months in the latter end of winter. But I am not so certain of this last.

SERPENTS.

Here I was told that the slow worm was found at Closeburn House, near the gate, and at the castle meadow at Cockpool.

Near this and within 20 miles was a young gentleman who in a hot summer's day did readily slip into a moss and catch an adder, which he presently thrust into his bosom, and kept it there for a while without any hurt and then dismissed it,

I saw a country woman here out of whose inferior propendant ear lob did spring such a flow of blood that she was almost gone, and thereafter when I saw her I could not perceive the least vestige of any aperture.

I have some pieces of a growing stone which I carried from the bulk of a fragment (but not found here). I was persuaded of the growing of it by many worthy persons and eye witnesses, and handled and saw it myself.

I saw and felt those horns (whereof I did give account in my first) issuing out of all a boy's extremities, and resembling young goat's horns till they acquire a due bigness and then fall off and others succeed.

Within 24 miles at a place within a mile and a half of the sea did fall a shower of herrings which covered near an half acre of ground. They were alive and eaten by gentlemen who told me when I came there (which was a little thereafter) concerning them. They soon dyed and quickly spoyled.

DISCUSSION.

Mr Barbour, architect, said he rose not to make any remarks about the paper but to thank Mr Macdonald for bringing it before the society. It was, he thought, the last work his father proposed

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to carry out for the society, and in that respect it was very interesting, and he thought it would of itself be an interesting feature in their publications. It showed not only many wonderful things, some of them probably quite correct, but it gave a good idea of how matters were regarded at the time by even an educated man such as Dr Archibald was. With reference to the date mentioned, it struck him that perhaps part of it must have been written at a later date. It mentioned, for instance, the cross of Dumfries. The expression was "our stately cross." He had no doubt that that referred to the Midsteeple, which was built in 1707, during Dr Archibald's day. Before that time there was a standing cross, but the Midsteeple itself had since been called the Cross of Dumfries. One of the wells referred to was the Brow Well. The Castledykes Well he did not know, unless that there was a stream from a spring there still. Of course he could not identify it with the one that was described there. He proposed a hearty vote of thanks to Mr Macdonald.

Dr Maxwell Ross, in seconding, said he understood Ruthwell was derived from Rudvald, meaning a stream from the wood, but one found over and over again that certain parties had got an idea it was derived from St. Ruth, and he recollected very well some years ago being taken by a person living there to see the original St. Ruth's Well, which he said he had just discovered two or three days before. He happened to be doing some work in the district, and this young man asked him to go and see the spring in a field down below the village, which he believed to be the original St. Ruth's Well. That derivation had been given on more than one occasion to him, although he did not suggest that it was correct. His experience with reference to wells was, that in moving along the coast of the Solway, and particularly about Priestside, he had come upon wells of a sulphurous character, and also wells of a very strong chalybeate character. There were two wells which certainly had the very marked odour of sulphurous hydrogen, and he was informed that there was once a doctor resident in Annan who used to go there regularly for his glass of sulphurated water. It had as strong an odour as that of the Moffat sulphurated water. The wells containing iron were so strongly impregnated with it down there that if an attempt was made to make tea the result was the production of a kind of ink, so that it could not be used for domestic purposes. With regard

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to the making of salt, one still saw the holes in the shore down there such as must have been used for that purpose.

Rev. Mr Andson said a curious fact was brought out, that there were a number of the wells which were not merely considered to be medicinal, but holy wells. One not referred to was that of Cargen, in which offerings were cast, coins not unfrequently; and it was mentioned in the paper that bread, cheese, and such things were sacred offerings.

Mr J. S. Thomson, referring to Castledykes, said on going over it the other day it was pointed out to him that there were the remains there of the old moat that used to encircle the house. He looked down and saw a deep excavation. Whether it was part of the old moat he did not know, but certainly there was such a thing as would have corresponded to it. Mr Barbour seemed to think that the "stately cross of Dumfries" referred to what would be the new Midsteeple at that time. But he was under the impression that there was a cross independent of the Midsteeple. Its site had been pointed out to him as having been several yards south of the step of Mr Miller, the engraver's shop, towards Bank Street, where a few transverse stones were laid in the pavement. Other people had told him that that was the site of the old fish cross, as if there had been at one time two crosses in the town.

Mr Barbour said he would suggest that Mr Macdonald might be kind enough to work up a little paper upon the life of Dr Archibald. His father was minister of Dunscore, and a very eminent man. There was a story told of him in the Presbytery books. At that time the Presbytery dined, and every member was required to be present, and if he was not present and could not give a proper reason, he was fined. (Laughter.) Mr Archibald of Dunscore one day came to the Presbytery meeting late, and was asked why. His reply was that his pony could not be "gruppit." (Laughter.) There were two or three appreciative notices of Dr Archibald himself in the minutes of the Kirk-Session. If the society wished it, he would give a short paper in regard to the question of the Cross. (Applause.)

The Rev. John Cairns, who presided, said they would all have liked if the original author, Dr Macdonald, had been able to give the paper, but he thought Mr Macdonald had done exceedingly well in the circumstances, and had given them not only a

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very consecutive but a very interesting paper. Dr Archibald appeared to belong to that old school of physicians who were good classical scholars. There were incidental references in the paper which struck him that he probably got his classics and medicine in Holland, where a great many of our medical men and ministers were educated in those days, and it would be interesting to inquire whether it was at the University of Leyden or one of the other Dutch universities that had such a great reputation last century. About some of the topographical details it was interesting to note that part of Greyfriars' Church was still standing, but there was a reference to Comyn's Castle, and also to the Castle of Dumfries, which seemed to bear upon a very able discussion by Mr Dickie (in "Dumfries and Round About") as to the original Castle of Dumfries. He thought Mr Dickie's theory was that Comyn's Castle was the original Castle of Dumfries, and they found Dr Archibald speaking of Comyn's Castle and the Castle of Dumfries. As to the derivation of Ruthwell, it was new to him, but it seemed to sin against a fundamental law of derivation—that is, if you had two derivations, reject the most obvious one. It looked to be too obvious. He thought the derivation that Dr Ross had indicated would be much more like the thing.

Mr Barbour: Why not take Sir Herbert Maxwell's suggestion, "Rudewell?" "D" in Welsh is "th," and if we take it in the same light as in the case of Ruthwell Cross, that would be Rudewell.

Dr Ross: But if you take the common pronunciation of the parish amongst the inhabitants, I think it supports the other derivation. The common pronunciation is Rivvel. They never speak of it as Ruthwell.

Mr Cairns said he thought the Norse settlements in Dumfriesshire, such as Tinwald, Torthorwald, Mouswald, would afford material for an interesting paper. He had much pleasure in conveying the thanks of the meeting to Mr Macdonald.

Mr Macdonald, in replying, said he accepted the vote, but he did so with the assurance that he himself deserved no credit whatever for putting the paper together. He was only sorry that the paper as he had presented it was so different from what he knew it was intended to be. He thought possibly one of the lessons that would have been enforced would have been what Mr Barbour suggested—the degree of credulity that obtained in those days

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amongst well-educated men regarding matters that had been reported to them, such as the shower of herring, and things of that kind. He appreciated their kindness very much in receiving the paper such as it was. There was a third account sent by Dr Archibald to Sir Robert Sibbald which had also been transcribed, but which he thought it unnecessary to put before the society, because it was printed along with Symson's communications as part of the appendix to a book which Symson subsequently published, entitled "A Large Description of Galloway."

17th April, 1901.

Mr ROBERT MURRAY, V.P., in the Chair.

Donations and Exchanges.—The Secretary read a letter from Mr W. J. H. Maxwell, M.P., forwarding ten coins of the reigns of Alexander III. and Edward I. and II., which he had been able to obtain for the Society out of the Treasure found in Closeburn Parish last winter. Mr Maxwell was thanked for his services. The following exchanges were intimated:—Bureau of Ethnology, U.S.A. Part II. of the 17th Annual Report. Journal of the Elisha Mitchell Scientific Society, 17th year. Geological Institute of Mexico, 14th number.

COMMUNICATIONS.

I.—"*Some Bird Notes from Eskdale.*" By Mr RICHARD BELL of Castle O'er, Eskdalemuir.

In the parish of Eskdalemuir a student of ornithology will find his observations limited to the more common species of small birds, and to owls, the smaller hawks, and the *corvidæ*.

Rare visitants are rare indeed, and these, for reasons best known to themselves, seem generally to give the parish a wide berth. I think this paucity of species is owing, in great measure, to the natural features of the parish, which lacks the bosky brakes, the hedgerows, and young plantations so congenial to the wants of our feathered friends, and who find plenty of their favourite haunts in the lower and more cultivated parts of the country.

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The surroundings are almost entirely pastoral, consisting of hills and moorland; while the woods, which are generally of spruce fir, mixed with a few hardwoods, are nearly all full grown, and lie, for the most part, in the valley along the course of the river. These trees, with their large coarse branches, are not suitable nesting places for the smaller birds; they prefer those from six to ten feet high, with closer and greener foliage, which afford them better shelter from their numerous enemies.

Owing to these circumstances I will confine my remarks to-night, with one or two exceptions, to some of the rarer visitants to the district, which have been observed by myself or friends. Several of them are common enough in more favoured districts, and I will only refer to them as being rare in Eskdale. One or two, which I have seen further from home, are rare anywhere, and being objects of general interest, I will take the liberty of alluding to them also.

THE GOLDEN EAGLE.

I have only heard of one specimen being seen in the district. It was shot on the farm of Cote many years ago.

HONEY BUZZARD.

A specimen was shot in the year 1850 by my brother, and was stated by the late Sir William Jardine to have been the second Scottish example then recorded.

ROUGH-LEGGED BUZZARD.

I myself shot one in the parish of Westerkirk in the year 1867. I saw it fly from a steep bank of thorn and hazel and disappear behind a large tree which screened it from my view for a second or two, but so soon as it passed the tree I, on the impulse of the moment, fired, and unfortunately my aim in this instance was too sure—I say unfortunately, as I deprecate the destruction of every rare visitor; but I was young then and anxious to secure anything rare. I confess myself culpable, and the fact of my being ignorant as to what the bird was till I picked it up is no excuse, as I was sure it was a rare one of some kind. I regret the barbarous act, and would not now destroy a rare bird. This one had indulged so heartily in a feast of partridge meat that its crop burst when it fell to the ground. Seven specimens were

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seen at one time during the Vole plague of 1876, and some years ago one frequented the parish for a considerable time. I will again refer to these birds when speaking of plagues.

MERLIN HAWKS.

These birds sometimes, but rarely, breed in the district, and I never saw one till I came on a brood of young birds in a wild, outlying part of the country, on the watershed between Dumfriesshire and Roxburghshire. I was walking over the heights when my attention was arrested by a hawk rising close to me and settling a few yards further on. On looking about me I saw other four on the ground, and the parent birds having come on the scene, I discovered they were merlins. The chance of procuring a live specimen of such a rare bird was too good to lose. I thought, as they apparently had very lately left the nest, that I would have no difficulty in securing one; but I was foiled in my attempt, and in a very irritating way. Whenever I got close to one of them and imagined I had only to put out my hand to seize it, it rose up and flew about twenty yards only, carrying out the same tactics over and over again. In my eagerness I commenced running, in the hope of tiring one of them out, but it was they who tired me out, and I frequently fell down exhausted in the act of stretching out my hand. After spending an hour in this fruitless work, and considering that I had a rough walk of twenty miles before me, I gave it up in despair, and my collection remained minus a native specimen of a merlin hawk.

KINGFISHERS.

Within my remembrance a kingfisher was unknown on the river, but now scarcely a season passes without one or two being seen, though no nest has ever been discovered.

NIGHT JAR.

I have known of four specimens only in the neighbourhood; one was killed by a shooting tenant on the open moor at the head of the parish. My brother saw one on the lawn at Castle O'er, hawking in the dusk, round a cherry tree. I myself saw one at Castle O'er, sitting along the trunk of a fallen-down tree. These birds sit lengthways on a branch or log, not across it—and one

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was shot at Westerhall, in the parish of Westerkirk, some time in the sixties.

SAND GROUSE.

During the invasion of these birds into Britain in 1887, several were seen on Castle O'er ground, as well as at other places in the parish, but as I was residing in England at the time I did not see any myself. They did not remain to breed.

QUAILS.

One was shot many years ago on Castle O'er by my brother-in-law, Mr Wilson, Billholm. It was stuffed and kept as a curiosity, until a cat ate its head off. Some years later another was shot on the same part of the ground, and I was presented with an egg taken from a nest in Roxburghshire.

WATER RAILS.

The only specimen I have known was brought to me by one of my shepherds, who caught it far out on the hill ground. I tried to keep it alive, but it died from want of its natural food.

REDSHANKS.

Two or three pairs of these birds, which were unknown in the district till three or four years ago, come annually now, apparently to breed, into the parishes of Eskdalemuir and Westerkirk. No nests or young birds have yet been discovered, but as they have been seen during all the breeding season, and were uttering the peculiar cry of such birds when anyone approaches a nest or young, Mr Beattie of Davington tells me that he has no doubt whatever that they do breed every year on the farm of Dumfedling, of which he is tenant.

DUNLIN.

Again I have to thank Mr Beattie for letting me hear of the nesting of a very rare bird in the parish, namely, the dunlin. In fact it is the first specimen ever recorded. Last year one of his shepherds found on Dumfedling a nest containing three eggs, but the single bird, which he ever saw near the nest, was unfamiliar to him, and he never saw a male. Mr Beattie, after allowing more than the usual time for incubation to pass, lifted the eggs and discovered they were infertile. As he had never seen

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similar eggs before, and never saw the bird who laid them, he took them to Edinburgh and showed them to Mr Small, bird-stuffer, George Street, who, without hesitation, pronounced them to be those of a dunlin, at the same time producing one from his own collection exactly similar to Mr Beattie's specimens. A short time after finding the nest the same shepherd saw a pair of these birds on another part of the ground, but could not find any nest. The bird who laid the eggs must either have arrived on the ground, unaccompanied by a mate, or had lost him some time before nesting.

SKUAS.

I had presented to me a very fine stuffed specimen of a very rare bird in Britain, namely, a parasitic skua. It was shot at the head of the river Kirtle in the autumn of 1867. A pair were seen together, but only one was secured. This bird is a native of the Arctic regions, and is a very rare, occasional, visitant to our shores. I sent it on loan to the late Dr John Alexander Smith, Edinburgh, for exhibition at a meeting of the Royal Physical Society, held on 22nd January, 1868. Up till then very few instances of its occurrence in Scotland had been recorded. In acknowledging receipt Dr Smith wrote me as follows :—"It is a fine specimen of a rare bird, although several young birds have been got in England. It is the Lestris parasitica of Temminck, the Lestris Buffonii, Buffons Skua, of Yarrells British birds." A bird in a very weak state was seen in the parish on the river Esk a few years ago which, from the description given to me, was no doubt a skua, but as it was not secured the species was not determined.

CROSSBILLS.

Three or four years ago a small flock of these birds frequented the avenue for some time. My attention was drawn to them when passing under a spruce fir—first, by hearing a grating sound overhead, and then seeing many fir cones falling to the ground one after another. On looking up I saw that there was a flock of these birds, and that the same thing was going on on several trees. The grating sound was produced by the birds extracting the seeds from the cones. They remained for several days, and were so little shy that they allowed me to get quite close to them and examine them with a field-glass. When the

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flock left, one pair remained all summer; but, if they stayed for breeding purposes, I never could discover their nest. Crossbills were reported as being particularly numerous throughout Scotland and England that season.

SOLAN GEESE.

When living at Billholm a message was sent to me asking if I would come to a cottage about a mile away and see a curious bird which had been found in an exhausted condition on the hill by a shepherd. Being interested in everything curious, I promptly answered the call. I was taken to an outhouse, where I saw on the floor a solan goose. Beside it were both oats and some trout, evidently put there to see which it liked best. I did not offer it any corn, but picked up a trout by the tail and dropped it into the gaping mouth of the bird, and with one gulp it disappeared down its throat. As the poor creature was apparently starving, I held another trout in my fingers, meaning to drop it where I did the first, but this time the goose anticipated my intention, and springing up in the air it seized both the trout and my thumb. The result to me was excruciating agony. The first joint of my thumb was "cut to the bone" by its formidable and razor-edged beak. Cutting to the bone on such a part of the human body does not mean a very ghastly wound, but the pain I suffered for several days was very great. This visitor was an involuntary one, as it had evidently been carried inland the night before by a great storm of wind blowing from the direction of the Solway Firth, which is, as the crow flies, about 25 miles distant.

Solan geese, after being salted and dried, are used as an article of food in Orkney, and I remember the late Professor Ayton, when Sheriff of that county, sending us one as a present, which tasted very much like ham. Many years ago these dried geese found their way to the lowlands of Scotland, and were used as an "appetiser." A small portion when eaten before meals was supposed to tickle the appetite.

GUILEMOTS.

Another involuntary visitor was a guilemot, which was brought under exactly similar circumstances as the goose. I myself found it flopping along the public road, which runs

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along the hill side, just at the gate of the back entrance to the house. As it also was in a very exhausted condition, I brought it home and put it in one of the court-yards of my aviary. But after considering the difficulty of procuring a constant supply of its proper food, I opened the door, after the bird had rested awhile, and the moment I did so it rushed out, still unable to fly, and fluttered away straight towards the river. How did the bird know the river lay in the direction it took? I am quite satisfied (from the place where it was when I picked it up) that it had never been near or seen the river. It had evidently just come off the hill on to the road. When it left the aviary it could not see the river owing to the presence of a thick hedge, beyond which was a wide, flat field, and the river itself was bounded by steep banks. Still, the bird made for it as if it had been familiar with it all its life. Was this instinct? or did it hear the sound of the water running during the time it was in the aviary?

TEAL.

These birds are very rarely seen in Eskdalemuir. I have only once seen a covey during all my sporting experience, and out of it I shot one bird only. They breed annually over the watershed in the parish of Ettrick.

WILD GEESE.

Thirty or forty years ago very many wild geese might have been seen annually flying to and from their breeding grounds, both in spring and autumn. Now, such a sight is not at all common; and whether these birds have become less numerous, or whether they have changed their line of flight, it is hard to say. I remember some years ago, when conversing with my groom on the subject of wild geese in front of the stable on a pitch dark night, that I remarked how seldom wild geese were seen now, when at that very moment we heard a flock cackling overhead. The coincidence was rather a startling one. I know of one only being shot in the district. A flock having landed in a friend's field, he secured a specimen by stalking the birds.

WOOD SANDPIPER.

I cannot include this bird in a list of rare visitors to Eskdalemuir; but as I succeeded in securing the first specimen then

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recorded as having been shot in Scotland, I will take the liberty of alluding to it. I shot it on the 14th August, 1857, a little to the west of the village of Heriot, among the Muirfoot Hills, in Midlothian. I sent this specimen also to Dr Smith, who exhibited it at a meeting of the Royal Physical Society the same year. In the course of Dr Smith's remarks at the meeting he said:—"As I could find no notice of the wood sandpiper having previously been observed in Scotland, I sent the specimen to Sir William Jardine, and from the answer he was kind enough to send me, I quote the following passage:—'There is no doubt of the bird being the *totanus glareola*, *Temm.*, as you suppose. But it is an interesting specimen, as I am not aware of any other being recorded as killed in Scotland, although it has been got in Northumberland and the borders. Your bird, I think, is in its first year's plumage, indicated by the brown markings, and the thickening of the tarsal joints. The season in which it was obtained also is just that of their leaving the breeding places.'"

WATER HENS.

The parish is devoid of suitable places for these birds breeding in any number, there being an absence of ponds, and the river is a rapid one, without a single back-water with protecting reeds. One may pass up and down the banks for a month without ever seeing one. Still, a few pairs have of late years taken up their abode permanently on the river and breed; though their numbers do not visibly increase. The only places where they can find shelter at all for their nests are at one or two spots where willow bushes hang over the water. Some years ago a water hen entered the cottage of one of my shepherds in the autumn, and took up its abode there all winter. It fixed upon a certain corner of the kitchen, and though it went and came during the day, it always returned to its favourite roosting place for the night. It was perfectly tame, and mixed with the household and dogs in the common sitting-room. It was fed chiefly on bread and potatoes—rather a strange diet for an aquatic bird, though, I daresay, it procured a sufficient supply of its natural food from the river, close to the side of which the cottage stood.

Since I began farming 37 years ago I, as well as others carrying on the same calling, have suffered in our "flocks and

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herds" from as many "plagues" as did the Egyptians of old. I do not mean to enter here into a description of all these plagues, but I merely mention them so as to bring under your notice that two of them—the vole and caterpillar plagues—brought in their train, not what I would call other plagues, but "invasions" of birds, and which proved to be beneficial instead of hurtful.

During the Vole Plague of 1876 rough-legged buzzards came to it, from whence no one could explain, though Norway was suggested as the country of their advent. My shepherd, as I said, counted seven of these birds in one company, hawking about the hill-sides, and he had ocular proof that they preyed on voles. A single bird of this species is a rare sight, as previously mentioned, and if many came from a foreign country how were they attracted from such a distance? As I do not keep a permanent gamekeeper a great many owls, of both the brown and long-eared species, as well as kestrels, breed in my woods annually. The kestrels, in the absence of more congenial nesting places, build on the spruce fir trees, of which the plantations principally consist. When the plague broke out, which it did on the higher hills at the head of the valley, these birds forsook my woods and went to the "moused" ground; not an owl or a kestrel was to be seen for some months.

SHORT-EARED OWLS.

When the army of voles, on their march southwards, arrived at Castle O'er I was pleased to welcome back my "vermin," accompanied by a great number of short-eared owls, which had been attracted to the plague. My friend Mr Beattie told me he had seen fourteen owls under an overhanging bank of the river, and that the sight of so many sitting in a row blinking in the daylight was a comical one. He also counted 42 of the short-eared species on the wing at one time. This large increase of short-eared owls was a strange feature of the plague. Letters appeared in the public prints noticing it, and several writers said that up till then these owls were merely winter visitants, and that they had never been known to have previously nested in this country; but my experience is entirely opposed to this belief. I have known of these birds nesting on the neighbouring hills so far back as 1864. There was never a season up to 1879, when I had more occasion to travel over moorland than now, that I did

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not either see their nests, or a pair or two diving at my dogs in such an aggressive way as to leave no doubt that a nest was in close proximity. I knew two cases of serious attacks by these birds, one on a man and another on a young lad, the latter having the back of his head much cut with their claws.

During the plague the short-eared owls bred on most of the farms ravaged by the voles. One evening when driving along a road stretching for some miles over moorland I counted fifteen parties of these birds, each consisting of from four to eight, and I have no doubt they were separate families, as they kept together hawking after voles, and at long distances from each other. They began to breed very early in the season, as one of my shepherds saw a nest so early as 29th February, 1892—leap year. The female was sitting on twelve eggs, with only her head visible above the snow, which covered the ground to some depth. Round the nest were 17 dead voles, evidently brought there by the male bird.

STARLINGS.

The very same farms which suffered from the voles were ravaged by two other plagues, caused by the caterpillar of the antler moth, of which the first outbreak occurred in June, 1885. My attention was drawn to it by seeing immense flocks of starlings passing the house during two hours each evening. They flew in continuous streams, the time chosen being invariably between the hours of 6 and 8 p.m. Each flock consisted of from one to several hundreds, and their combined numbers must have amounted to very many thousands. They followed each other in close succession, and generally kept well overhead, but one flock in particular flew a few feet only above the bed of the river. It consisted of so many birds that the stream stretched for a length of above a quarter of a mile, with a breadth of ten or twelve yards. When looking from the window I could easily fix the length of this flock, because when its head was at a certain pool in the river, its tail was at another. I could not understand the reason for such a migration of starlings so early in the season —the month of June. The number was so great that I could scarcely think so many were bred in the whole of Scotland, and the track chosen was one which I had never seen used before. After this supposed migration had gone on for several days I was

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informed that there was quite a plague of caterpillars on the hills at the head of the parish. I at once associated the presence of the birds with the caterpillars, but still could not think why these flocks were nightly leaving the plague behind, to be succeeded next day by other flocks equally numerous, nor where the latter could all come from. The explanation of this was given to me by my shepherds, who told me that the birds which were seen passing every evening returned again in the early morning. Notwithstanding that so many thousands left the ground every evening, a friend who lived on the infected ground told me as many apparently remained behind roosting on the trees and the shrubbery around Cassock House, as well as on the ground in the neighbouring meadows; and if anyone approached them in the early morning the noise made by their chattering, and that made by their wings when rising, was almost deafening. I never could discover where the migrants went to roost; they flew due south, and must have travelled a long way. I would have learned where their roosting place was if it had been within a distance of many miles. If I were asked if there were sufficient numbers of caterpillars to serve as food for so many starlings, I would answer in the affirmative. They marched in armies, straight ahead, and the consequence was that when they encountered open sheep-drains they tumbled into them in such numbers that their dead bodies dammed up the water, and they might have been shovelled out in barrow-loads. The wheels of vehicles, when an army was encountered crossing the road, became quite wet and filthy through crushing them to death. One curious thing was the state of the roads during the plague. When driving in the infected district of the parish, I could not think what the surfacemen had been up to. It seemed as if, instead of putting down metal in the usual way, he had taken it out of his barrow in spadesful and scattered it thinly all over the road. On inquiry I was informed this was the work of the starlings, who had dug up the stones, probably on the search for grit small enough to swallow. The starlings were attracted to this plague in the same mysterious way as the buzzards and short-eared owls were to the plague of voles, and who can tell what agency was at work? It can scarcely be attributed to eyesight or scent, which we are told are the two senses which lead vultures from long distances to a dead carcass in hot climates. Starlings breed

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in very restricted numbers in the outlying districts which were infested with caterpillars. Very few, indeed, breed within a radius of very many miles from it, and therefore it is wonderful where the countless thousands came from.

In the absence of old ruins, cliffs, or suitable rocks, they require to satisfy themselves, as breeding places, with a very few isolated hollow trees; or the thatched roofs of cottages, of which I do not think there are two left in the parish of Eskdalemuir. As an example of the avidity with which these birds will seize upon the first suitable breeding place offered to them, I may state that, in order to encourage them to breed near my house, I made twenty-five boxes and hung them up on the surrounding trees. Within a week every box was occupied by its pair. One box, which was blown down by the wind, I fastened against the wall of the house, and on the evening of the same day a pair had taken possession of it. Unfortunately I had made the entrance holes of these boxes a little larger than was necessary, and I regret that this oversight on my part was taken advantage of by a brown owl which had a nest of young ones close to the house. Many a time I have seen it land upon the perch of a box, insert its foot, and pulling out a young starling, carry it off to her nest. My mind was divided between destroying the owl, and by so doing risk another plague of voles, or allow it to kill the starlings at the risk of another plague of caterpillars. As the starlings were the more numerous, I decided in favour of the owl, and allowed her to follow out the bent of her instinct. *Apropos* of this owl's nest, I may say that when the young had flown, but before they had gone far from the precincts of their cradle, a family party from the house invaded the thicket where they were. We were accompanied by the household cat. The moment the old birds perceived pussy, one of them made a dive on to its back and flew off with both its "hands" full of fur. With a yell the cat started at full speed towards the house, and prudently gave a wide berth to that thicket for many a day. Proud of their achievement, both the old birds became very aggressive to us. They made so many swoops close to our faces that we had to put our arms up in front of them to preserve our eyes from their repeated attacks. We became so alarmed for the safety of the younger children that we considered

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"discretion the better part of valour," and, following the cat's example, retreated to the house.

Mr Service moved a very hearty vote of thanks to Mr Bell for his very exhaustive paper.

II.—"*Forts and their Connecting Trenches in Eskdalemuir.*" By Mr RICHARD BELL of Castle O'er, Eskdalemuir.

The Parish of Eskdalemuir is rich in Antiquarian remains, and although the forts themselves have already been referred to by the Rev. Mr Dick, parish minister, in a paper on the "Antiquities of Eskdalemuir," read at a meeting of this Society in November, 1896, perhaps I may be permitted to give some further details, especially regarding their connecting trenches, which have hitherto been unrecorded in our Transactions.

Dr Christison in his work, "Early Fortifications in Scotland," states that there are 41 forts in the Eskdale district; of these, there are 20 in the parish of Eskdalemuir alone. This number may not appear great when we consider the extent of the parish, which is just about 12 miles in extreme length, and 10 miles in extreme width, with an area of 43,518 acres; but when we know that every one of them dominates the valleys only, and that none are more than a few hundred yards from the river Esk, or its tributaries, we must allow that they are comparatively thickly planted.

It is scarcely necessary for me to describe the appearance, or give particulars, of each of them; they are all of the same type, round or oval in shape and defended by one or two lines of deep trenches, the soil from which has been thrown up, either on one or both sides, so as to form mounds or ramparts, and so add to the difficulty of attack from the outside. These ramparts were probably still further strengthened by stockades, and all combined would offer a strong defence against an enemy armed with the primitive weapons in use at the time these forts were occupied.

The principal one in the parish is that of Castle O'er, which is of great size and of great strength, and, judging from the vast amount of labour expended upon its fortifications—all the principal trenches being excavated for some feet deep through solid

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rock—it is evident that such a work was not in the nature of a temporary encampment; everything indicates that it must have served as a stronghold by its inhabitants for a very long period, possibly for hundreds of years. I am strengthened in this opinion when I consider not only the extent of defensive works in the immediate vicinity of the fort itself, but of the immense net-work of connecting trenches formed all over the Castle O'er property. But before proceeding further in this direction, allow me to make a few remarks regarding the name of this fort.

The name "Castle O'er" is, comparatively speaking, a modern one; its ancient name was "Overbie"—"bie" signifying, I understand, a castle, fort, or other stronghold—and it is supposed to be the farthest north of the three principal forts, Overbie, Middlebie, and Netherbie; or, the over, the middle, and nether forts, or castles.

It must be admitted, I think, that these ancient British works existed long prior to the Roman Invasion, and I think that the names above mentioned—which are not Latin names—refer to British forts and not to Roman camps.

I am not sure if the earth-work at Netherbie has ever been proved to be a Roman Station; if it has not, then I suggest it is British; also that Birrenswark and not Birrens was the Middlebie of old; and further, that Castle O'er, or "Over Castle," is the modernized name of "Overbie." When my father acquired the lands of Castle O'er, they as well as the dwelling-house were known under the name of Yetbyre. Not liking this name—associating it, I have no doubt, in his own mind as having some connection with a gate and a cow-house—he re-christened both lands and house Castle O'er, from the fort of that name. If I expressed an opinion at all on this change of name, I would say it was scarcely a good one, as I am told that "Yetbyre" signifies the "Chief's Stronghold," and I consider this designation a more archaic and interesting one than the modern name, Castle O'er.

The first place I find it so called is in Timothy Pont's atlas, dated 1661, though he spells it in his usual quaint orthography, "Castleouyrn," then Sir Walter Scott, in the "Lay of the Last Minstrel," speaks of it as Castle-Ower:

> "Wide lay his lands round Oakwood Tower,
> And wide round haunted Castle-Ower."

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I have heard it suggested that the rectilinear camp at Raeburnfoot was the true Overbie, and feeling rather piqued in my vanity that an attempt might some day be made to deprive me of the name of my pre-historic fort, I spoke to the late lamented Dr Macdonald, F.S.A., on the subject, and his reply to me was—"They may cart your camp away, but they cannot cart away its name; it has been known as Overbie from time immemorial."

This opinion, expressed by such an eminent Archæologist, was a great consolation to me, and, as recent explorations at Raeburnfoot have failed to prove that it was occupied by either British or Romans for any length of time, I am glad to think that the name of Overbie, as applied to Castle O'er, still "holds the fort."

Shortly after the rebellion of 1745, General Roy was instructed by the Society of Antiquaries of London to survey and make plans of some of the principal forts and Roman camps in Scotland; this he did, and the result was the publishing of his great and well-known work on these Remains, "Military Antiquities of the Romans in Britain." Among those figured in his work is Castle O'er, and he describes it as the *supposed* Uxellum of the Romans; this is mere surmise, and I myself prefer to look at the fort as a more ancient landmark in the country where it is situated than any of the remains of camps left by the Romans.

The General's description of the Fort is as follows:—"In Eskdale moor, on a high point of land, formed by the junction of the Black and White Esks, Castle Over is situated. The nature of the fortifications of this ancient place will be best conceived from the plan and sections of them which accompany this work. But besides these principal vestiges, which are all that are here referred to, there are traces of extensive lines that have reached towards the south, but chiefly towards the east, as far as the bank of the Esk, seemingly with the intention of keeping up the communication with the river. From the concurrence there of so many circumstances, remarkable vestiges, lofty situation, affinity of name, vicinity to Mons Uxella, and position westward from Trimontium, there surely seems sufficient reason to conclude that Castle Over is the Uxellum mentioned by Ptolemy and Richard as belonging to the Selgovæ, and which appears to have stood not far from the eastern frontier; the summit of Mons Uxella prob-

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ably forming the boundary between them and the Gadeni. That part of the works of this place were originally British there seems to be little doubt; though the Romans, after they got possession of it, might add to or alter them according as they saw reason for so doing."

As I before stated, the fort is of considerable size, and is situated on the top of a hill, 884 feet above sea level, and 296 feet above the dwelling-house, and so near it as to be reached by an easy climb of a quarter of an hour. The fort is composed of what I will call an inner stronghold, defended by deep trenches, on the inner side of which have been strong stone walls, now, alas! entirely destroyed. The outer sides of the ditches are mounds or ramparts, formed, as usual, with the excavated soil. This stronghold occupies the whole top of the hill, and measures, roughly speaking, 510 feet long and 350 feet wide, whilst the size of the whole fort, with its immediate surrounding trenches, is just about 900 feet long and 570 feet wide; these measurements being, I understand, of unusual dimensions for a fort of this type.

As no excavations had ever been made with a view to discover any relics left by the original occupants of the fort, or signs of a subsequent occupation by the Romans, as suggested by General Roy, I employed men for some time, digging at every point where I thought anything might be found, but entirely without result, excepting one coin and a beam of charred wood about seven feet long. I caused sections to be cut through the trenches, to ascertain their original depth and conformation; some of this work was done under the supervision of Mr Barbour and Dr Christison, F.S.A. We found that the trenches, as they exist now, are nearly eight feet deep and 35 feet wide between the tops of the two ramparts; on removing the soil which had, in the course of ages, been washed down from the sides and summits of these ramparts, we found it was nearly four feet deep, and that the trench was cut to a corresponding depth through the solid rock, two feet wide at the bottom, just wide enough for a man to walk along it comfortably. Allowing for this "wash down," the trenches must have been originally about 13 or 14 feet deep.

The find of the coin above referred to was rather a curious one; it was turned up at the first place where we commenced excavating, viz., at the principal entrance gate, and I thought we

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had merely "to dig to find," but this proved to be the only relic.

I submitted it to Dr Anderson, Antiquarian Museum. Edinburgh, for his opinion. He said it was so defaced he could scarcely express an opinion, but from its size and general appearance he thought it might be of a period between the reigns of Charles I. and William and Mary. It would be interesting to know how that coin came there.

What surprises me in regard to this important fort is the absence of a rubbish-heap, or "kitchen midden." I have searched in vain for it, both by excavation, and by probing with an iron rod every eminence within such a radius, outside its principal trenches, as one might expect to find such a deposit, but invariably the pick or rod encountered solid rock. I cannot conceive that the place was inhabited, for the many long years indicated by the great labour bestowed upon its formation, without the inhabitants having chosen some spot to deposit their rubbish. Having failed to discover a "heap," I thought, as the ground at one side of the fort is very steep down to a burn, this place might have been used as a "shoot," but trenches cut at different points across the steep hill revealed nothing.

The ground being generally of a rocky nature, the soil is very shallow, and the bones of animals used as food would not be covered deep enough to preserve them from the destructive effects of the weather; the fort dwellers would, possibly, not be rich in pottery, and took good care not to break much of what they did possess; their fuel would consist, probably, entirely of wood and peat, and the ashes of such material would long ago be incorporated with the soil, and hence the absence at the present day of any vestiges of human occupation—of a domestic nature at least.

About half a mile to the north of Castle O'er house is another work of the same formation as the minor forts; it is marked in the Ordnance Survey maps as a fort, though, from its position, it is badly adapted for defensive purposes. Differing in position from the others, it lies in a hollow on a piece of flat ground, close to the river bank, so close that the river has reduced it from its original round form to a semi-circle, and it is commanded on its west side by a semi-circle of very steep ground, which must have rendered it subject to easy attack from that direction. Mr

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Francis Lynn, F.S.A., Galashiels, who has devoted many years of his life to the exploration of forts and trenches in the South of Scotland, and North of England, tells me that it is unique in his experience both as to its undefended position and to this peculiarity, that its floor is raised higher than the ground outside the inner trench. He suggests that it may have been used as an arena for athletic sports, the spectators looking on from the surrounding slopes. I was more inclined to accept the opinion, expressed to me by our friend Mr Barbour, that it might have been the Cemetery of the main fort, especially as a trench or hollow way leads directly from one to the other. On making excavations we found that the subsoil of the work is blue clay; upon this clay logs of wood have evidently been laid to form a floor; the logs themselves have decayed away, but the bark remains, and I scarcely think that layers of bark alone had been used, as it would have been too thin and yielding for such a purpose. On the top of this wooden floor is a superior one, formed with rough stones, laid with their flat side down, and at the present day about 18 inches of peat moss has accumulated above these floors. On a space quite 40 feet in diameter, in the centre of the work, we came upon a collection of rough stones, 18 inches thick, and below this, resting upon a layer of charred wood, mixed up with the clay, was a great quantity of minute fragments of bones, none of them being more than one inch in length, and these, undoubtedly, had been subjected to the action of fire. If these bones were human, I hoped that Mr Barbour's suggestion that this was the Cemetery, or "Crematorium," of the main fort might be corroborated, though it was not quite obvious why a Cemetery, or an arena for athletic games, should require strong earthworks for their protection. However, on submitting the bones to Professor Struthers, Royal College of Surgeons, Edinburgh, for his opinion, he said that without being able to declare positively that they were *not* human, he inclined to think they were those of some of the lower animals. I fear, therefore, in the face of such an opinion, the Crematorium theory must be abandoned, and the question still remains—what was it?

Besides the trenches immediately surrounding the main fort, and which are palpably for defensive purposes, there are others starting from them, and radiating over the greater part of the lands of Castle O'er, the use of which is not so obvious, unless

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they were used solely as a means of communication between the forts. I have all my life noticed parts of these trenches, here and there, when out on the hills with my gun, but paid little heed to them, further than that they had evidently *something* to do with the forts, and that they made splendid shelter when stalking an old blackcock.

The few trenches I had before traced out encouraged me to go on, and becoming enthusiastic over my discovery, I set to work with a will all through the summer of 1896, and I was very much astonished at the result. Owing to my intimate acquaintance with the ground, I was able to lay down on the Ordnance Maps, in red ink, the result of each day's work as accurately as possible, without an actual survey. On running a wheelometer over the lines as laid down, I found they extended to the astonishing length of about 13 miles, and that considerably within an area of 2700 acres. Of the 20 forts in Eskdalemuir, eight are situated on my own lands of Castle O'er and Crurie. Two of these are rather outlying from the others, and I have failed to connect them with the remaining six, whose connection with each other is complete. At whatever part of the ground one enters a trench and walks along it, either to the right or left, he will find his way into one of the five minor, or into the main fort, as he chooses. They are all of the same type as the earthworks defending the forts, but are not so deep, and in many places, *e.g.*, when running through peat mosses or bog-ground, they are entirely filled up. These breaks are one of the difficulties in tracing them, but during the course of my work I noticed that where the trench had run, the vegetation along its line was of a different kind, or at least appeared of a different colour, from the other parts of the moss or bog. In bog-ground a growth of rushes very frequently reveals the line of the trench. In such places a sheep's footpath is almost invariably a good guide, as a searcher will discover that the sheep have found out, and have chosen for their road the hard top of one or other of the mounds. By following these indications across the soft ground, the trench will again be found at the other side, stretching away along the harder ground beyond. Another difficulty in tracing them is where they run along the steep side of a lea brae, or where loose stones abound; the continual spurring of sheep's feet on the upper side of the trench has rumbled down earth and stones into it, and

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has gradually filled it up. These breaks, in the continuity of the trenches, added to my labour, and I am sure, in trying to find them, and then tracing them out, I walked three times 13 miles.

One trench on the ground deserves special mention. It is widely known as the "Deil's Jingle," probably "Dingle," a hollow between two hills or mounds. It is supposed to run across country all the way from the Solway Firth to the North Sea, and I quite conceive there may be some truth in this supposition; it runs through Castle O'er ground for close on five miles, and one of my men, in whom I have full reliance, traced it two miles further north from Castle O'er march fence. It runs almost due north and south for over a mile, when it inclines to the north-east, then, with a sharp bend, it runs straight north towards the Parish of Ettrick, in Selkirkshire.

I am strongly of opinion that it would be found to join that well-known work the "Catrail," which passes through Ettrick, close to Tushielaw.

There is much difference of opinion as to what these *long* trenches were used for, but as this is a controversial matter, I cannot enter into it at present. My own opinion is, that the Castle O'er group at least were used as hollow ways along which the fort dwellers could move to and fro the different forts without being seen by their enemies. But it is difficult to understand why, if used as roads, two of them are formed up and down exceedingly steep scaurs, which entails severe physical exertion on any one ascending, or even descending them, whereas, by a detour of a few hundred yards, an easier way could have been found.

Besides these forts and trenches in the Parish, there is the rectilinear camp at Raeburnfoot, which has been explored and fully described at a meeting of this Society; and another of the same form, still unexplored, within which is situated the graveyard of Watcarrrick Chapel.

Then, there are the two important important stone circles on the Farm of Cote, known under the names of the "Girdle Stanes," and the "Loupin' Stanes," both laid down in the Ordnance Maps as "Druidical Circles." In passing, I may say that I understand the word "Druidical" is now withdrawn from these maps, as there is no evidence that the Druids had ever anything to do with them; they are now recorded as "Stone Circles."

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Those I refer to are well-known, and have been already alluded to by Mr Dick. But there is one on the farm of Whitcastles, in the Parish of Hutton and Corrie, which, I believe, has never yet been recorded, and I think it is well that I should bring it to the notice of this Meeting.

I heard of it incidentally from one of the Sappers engaged in revising the old O.S. Maps; and I went at once to inspect it, and found it was a good example of such remains. It is situated close to the side of a path leading from Whitcastles to Cowburn, and is, I should say, about two or three hundred yards east from a stream called Boath's Burn. It consists to-day of nine large stones only, all prostrate, but from the irregular and at parts wide spacing, I think there may have been others removed; one certainly has been, as evidenced by the hollow in the ground where it had lain.

I made minute measurements of the circle and individual stones, the result of which is as follows:—

The two largest stones lie opposite to each other in a line due north and south, the one to the north is the larger, and measures 7 ft. 9 ins. by 5 ft. 5 ins. by 3 ft. 2 ins, the one to the south is 7 ft. 3 ins. by 3 ft. 5 ins. by 2 ft. 4 ins. The diameter of the circle from north to south is 141 ft. 6 ins., and from east to west 180 ft.

The dimensions of the other stones are:—

5 ft. 5 ins. by 3 ft. 6 ins. by 1 ft. 3 ins.
5 ft. 9 ins. by 3 ft. 0 ins. by 1 ft. 9 ins.
5 ft. 0 ins. by 3 ft. 0 ins. by 1 ft. 11 ins.
7 ft. 4 ins. by 2 ft. 6 ins. by 2 ft. 0 ins.
4 ft. 6 ins. by 3 ft. 2 ins. by 1 ft. 9 ins.
6 ft. 9 ins. by 6 ft. 3 ins. by 2 ft. 0 ins.
5 ft. 0 ins. by 4 ft. 0 ins. by 2 ft. 3 ins.

I produce a sample of the kind of stone used for the circle, and I need scarcely say it was chipped, not from one of the circle stones, but from a boulder of the same geological formation lying close by. It is extremely hard, and as these boulders have smooth surfaces, I had great difficulty in securing a specimen, with the only tool I had with me, viz., an ordinary carpenter's driving hammer.

Mr J. G. Goodchild, Curator of the Geological Survey Collections in the Museum of Science and Art, Edinburgh, tells me

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that "the specimen agrees well with many of the masses connected with the granites of Galloway (see the Geological Survey Maps of the district). It might be called a fine grained diorite-granite."

On the motion of Mr Barbour, Mr Bell was awarded a very hearty vote of thanks for his paper.

10th May, 1901.

Rev. WM. ANDSON in the Chair.

Donations and Exchanges.—Transactions of the Edinburgh Geological Society. Transactions of the Cardiff Naturalists' Society.

A letter was read from Dr Maxwell Ross, one of the Joint Secretaries, resigning office on account of his being so much engrossed with official work. It was agreed to minute an expression of regret, and the Secretary (Mr Bertram M'Gowan) was instructed to convey the thanks of the Society to Dr Ross for his services in the past.

COMMUNICATIONS.

I.—"*Concerning the Market Cross.*" By Mr JAMES BARBOUR, F.S.A., Scot.

Notices relative to the proclamation, on 26th January last, of the accession of King Edward the Seventh, at Dumfries, bore that the proclamation would be made at the Market Cross of the burgh. No pillar in such form remains to mark the place, and open proclamation, formerly common, is now so infrequent that few of the inhabitants probably would recollect the scene of any former event of the kind. The centre of the town and market place, however, is so well impressed and marked with the outstanding and characteristic Midsteeple as to leave little doubt relative to the intended place of assembly. The ceremony, which was accompanied with desirable solemnity and hearty loyalty and respect, presented with the background of the Steeple, the

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beautiful hand-wrought iron "ravel" showing to advantage, a scene impressive and picturesque such as probably few persons living have had the privilege of witnessing in the town. The proceedings on this occasion had the effect of rousing curiosity regarding the situation and form of the ancient Market Cross of the burgh; and the purpose of this paper is to submit such information on the subject as is readily available, and to stimulate further inquiry.

THE FISH CROSS.

Frequent reference is made in titles of property and other papers to the Cross of Dumfries; also the Fish Cross, in regard to which a word or two in passing may not be out of place. There is some reason for supposing that the Fish Cross stood at one time opposite the end of English Street, where the Fountain is now. A property in the Southergate is described in the titles, dated 1802, as being situated a little below the "Old Fish Cross," implying that the Cross was near the Southergate, and that a new Cross had by this time been erected at another place. Laterly, its site was a few yards south of the Midsteeple, at or near a well called "The Fish Cross Well," still existing under the street, and marked by a cross formed in the pavement. The Fish Cross is said to have been built about 1640. In 1662 the Council enacted that all red fish that come to the towne sall be presented to the Fish Croce wholly undivided, under the pain of confiscation for the poor's use. On 9th October, 1738, a committee of the Town Council was appointed to visit and consider the condition of the Fish Croce, cause repair or rebuild the same in the shape it is now in, or in such other form as they shall think proper, and to cause erect a post yrin. for fixing a lamp. Its latest form is said to have been a large round stone table on which the fish were laid out and exposed for sale. It was finally removed in 1831. I am indebted to Miss Richardson, Shakespeare Street, for permission to exhibit a drawing of High Street, belonging to her. It shows a pillar over a table base, at the place where the Fish Cross stood. Although evidently the work of an amateur, the drawing, so far as the street and buildings are concerned, is fairly correct, but in regard to the Cross, the base appears hardly adapted to support the pillar or for the purpose of receiving the fish.

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THE MARKET CROSS.

Returning to the main subject, the Market Cross of the burgh is alluded to generally, with those of other head burghs, in the old Scots Acts of Parliament in connection with royal and other proclamations. Frequently, also, it receives specific mention as the Market Cross of Dumfries; and locally, in the Town Council minutes and other papers, it is often referred to in connection with a variety of functions incidental to civic life in the burgh; but, although an outstanding and important institution in this way, the situation of it and the form do not appear from such references, but remain to be gathered elsewhere.

In old rental books of the Town Council are the following entries:

William Copland of Colleston—For his part of ye booths under ye Croce 0 - 13 - 4. For 2 foot of ground on the north end of the Croce allowed anno 1690 for enlarging the shops and for ane entry backward to the back of the shops, 0-2-0.

Alexander M'Gowan of Meikleknox—For his mid shop under the Cross, sometime his Mr John M'Gowan's, 0-13-4.

Alexander M'Gowan of Smithstown—For his part of the booth under the Cross 0-13-4. For 2 foot of ground on the south end of the Cross allowed anno 1690 for enlarging the shops and for an entry to the back shop, 0-2-0.

These entries refer to the block of flat-roofed buildings in the centre of High Street immediately north of the Midsteeple. A vacant space about 8 feet in width remained between this block and the Midsteeple, which was filled up some years ago by the Town Council erecting a small shop there.

The following is the description of the Cross contained in Edgar's MS. History of Dumfries, a copy of which is in the Society's library. Edgar was a writer in Dumfries, and likely to have seen the titles of the premises, and as he would be nearly twenty years of age when their rebuilding took place, in 1690, it may be presumed he had personal knowledge of the earlier form of the subjects described: "As to the Cross," he says, "it was before 1690 or 1691 an house about thirty feet in length, having to the front three shops, the floors a foot or two sunk under the street, and above the middle shop an arch of stone, and then on the back part a shop which entered in upon this stone floor, and

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the roof to the extent of eight or ten feet above this back shop, had appended on both sides spars of timber and slated to nigh four feet of the causeway or street." Whether the roof was of simple saddleback form or one more ornate, such as the top of the Midsteeple, is perhaps not very certain; but otherwise the description is sufficiently clear, accords with the town's rental book, and leaves no doubt that this centre shop, arched with stone and having a second storey entering on the stone floor above, was at least the basement of the ancient Market Cross of Dumfries.

About the way in which the place came to the parties in possession Edgar makes the following statement: "There were," he says, "three sons of —. M'Gowan, minister of Mouswald, in the old Presbyterian time before 1660, whose father or themselves, for some trifle of money or small consideration, being probably in the Council, bought or wadsett the four shops. Their names were Thomas, Alexander, and Mr John. Thomas had the south shop, Alexander the north, and Mr John the mid shop and the back shop above the arch. Thomas being tutor or guardian for Margt,, the daughter of Alexander and doer for Mr John, and himself being a wordley man, thought if he built up the Cross on both sides there would be two new shops on the back thereof, To that end petitioned the Admrs. that he might build up the Cross in a square building and cover the wings with lead above the north and south high shops, provided the town would grant him two feet of ground on each side to extend the building, which he obtained and performed," &c. This appears a somewhat extraordinary way of putting the matter, but it is little more than a reflex of the terms of the Council's minute relating to the grant of additional ground in the year 1690.

With permission of Mr Grierson, Town Clerk, I made search in the Council books of that year, and with difficulty discovered the minute, which is closely written in a small and peculiar hand not easily decipherable. It is conclusive of the situation of the Cross, affords substantial and reliable information regarding the curious position of parties' claims thereto, and is besides commendable as guarding with great care the town's interest. I conclude by giving the minute, which speaks for itself, in full:

> "Convened within the Tolbuith of Drumfries Friday the twenty two day of Augt 1690 years William Craik provost" &c.

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"The qlk day anent the suplication given in to the said Magistrates Common Counsall and Heritors Be Thomas M'Gowan, Merchant in Irving, makand mentione that qhairas the petitioner intends to cause cast down the walls on the north and southmost sides of the Mercat Cross of Drumfries not only for enlargement of the two shops under the same if (?) they would allow two foot of ground more on either syde yairof for yt effect But also that he may have ane shop above either of the said two laigh shops And is resolved to build the south syde betwixt and Michaelmas next and the north syde betwixt and the first of September yrafter, and to build the walls (?) with other work with a battlement on the top which he shall defend against wind and weather And to cover the roof with lead which will much more tend to the adornment of the place than to the petitioners advantage And shall be done and performed to the satisfaction and to the advyce and consent of the sd Magistrates and Counsall And therefoir for his encouragement craving the allowance of two foot of ground on either syde yrof the north and south sides of the said Cross for enlargement of the two laigh shops and for building a high shop above either of them And also the libertie to build a stair to enter up to the two high shops at the west end of the fabric And to grant him an Charter thereof upon his own reasonable expense And is content to give such ane additional feu dutie therefore as they should be pleasit to impose T.Q. which being be the said Magistrates Counsall and Heritors considered they unanimously with and under the express provisions and reservations aftermentioned allow to the petitioner two foot of ground on either syde of the north and south sides of the Mercat Cross for enlarging the shops yrof reserving always the towns right and priority (?) to the said Cross and providing always that the fabric and decorment on either syde and Battlement on the top yrof be done and performed to the satisfaction of the Magistrates and Counsall And that the north and south sydes and Battlement yron be perfected betwixt and the two several tymes above mentioned And that the petitioner uphhold the roof and maintains the battlement against wind and weather in the terms of the petitioner And reserving always power to the said Magistrates and Counsall to impose such a few dutie for the same in augmenting of the towns rentall as they shall think fit And further providing always that their prests. be noe homologatione of the M'Gowans nor of yr

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predecessors and authors right to the said shops But that it shall be leesum to the town to quarrell impun reduce and imprecate the right and priorities yrof and that it shall be leesum to the petitioner and to Mr John M'Gowan his brother and Margt. M'Gowan his niece to defend the same as accords of the law and the entry to the high shops are to be made on the west end of the fabric. With and under which provisions and reservations their prests. are granted be the sd Magistrates Counsall and Heritors and accepted be ye sd petitioner and noe oyrways And appoint thir prests. to be recorded in the Counsalls books the provost and bailies for ymselves and in name of the Counsall and the petitioner for himself and his said brother and niece to sign these prests. And ordains extracts yrof to be given be the Clerk.

THOS. M'GOWNE. WM. CRAIK.
JOHN IRVINE, bailie."

II.—"*Scottish Burghal Life in the 16th and 17th Centuries, illustrated by Extracts from Kirkcudbright Records.*" By Mr W. DICKIE, Merlewood, Maxwelltown.

I propose to place before you extracts from the earliest extant records of the Town Council of the royal burgh of Kirkcudbright. These are selected from a manuscript volume of minutes of proceedings covering the period from 1576 to 1682.

First I shall deal with the Constitution and Functions of the Council itself.

CONSTITUTION OF THE TOWN COUNCIL.

Even at a much more remote date than that with which we here start there had been a wonderful development of representative institutions in the towns of Scotland. The earliest existing charters to royal burghs, belonging to the eleventh and twelfth centuries, confer the right of electing councillors and magistrates upon the "haill communitie." To this phrase Mr Cosmo Innes has attached the restricted interpretation—"the whole body of qualified burgesses;" but the popular franchise, whether it were as broad-based as the language of the charters indicates or narrowed to the circle of burgesses, was superseded in the fifteenth century by a system of nomination known as that of the close corporations. The change was brought about by Act

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of Parliament; and the particular mode of appointment in use during the period with which we are concerned was regulated by an Act of the Convention of Burghs passed in the year 1552. That Act directs that the "auld Council" shall choose the new on the Wednesday before the feast of Michaelmas (29th September); that the two bodies shall meet jointly on the next Friday to choose leets of candidates for the various offices of Provost, Bailies, Treasurer, and Dean of Guild; and that on the Tuesday following Michaelmas, the old Council and its child, the new, shall again convene, having this time associated with them the Deacons of Crafts, to make the final election from the leets thus drawn up. In the case of Kirkcudbright, however, there were no Deacons of Crafts until 1681, when the trades were first incorporated.

The first of the Kirkcudbright minutes is of date 3d October, 1576, and is a record of "the chesing of the office men." This is the first: "The qlk day Robert M'Clellane is chosin dene for ane yeir, and sworne." Entries in identical terms follow with reference to other appointments in the order given, viz.:—

Herbert Gledstanis and Jon Meckill, bailies.
Thomas Andersoun, clerk.
Johnne Crauford and three other "officiaris."
Thomas M'Clellane of Bomby, Provost.
Johnne Gledstaines, thessaurar.
Thomas Cant, kirkmaster.

Then comes a list of the Council, which consists of the Provost, the two Bailies, and ten councillors. It will be observed that neither the Dean nor the Treasurer is of the Council. This first, "Thomas M'Lellen"—to use the spelling of the name adopted by himself—was afterwards knighted, and was the father of the first Lord Kirkcudbright. The castle which he built still stands in the town over which he ruled. Of the Bailies, Herbert Gledstanis sat in the Scottish Parliament as the burgh's representative. It would appear that the hon. member's education did not include the art of writing, for he was one of four members of the Convention of Burghs in 1582 who subscribed the Acts then passed "with our hands at the pen, led by Johnn Guthrie, notar, at oure command." The deficiency was one which he shared with the commissioner from the city of Glasgow.

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OFFICIALS OF THE TOWN.

The Council seems to have possessed an ample establishment. In addition to the officials mentioned in the minute I have quoted, and the executioner, to be afterwards referred to, we have a record, first in 1600, of the appointment of a drummer and a piper. The former was to get £10 of fee "and his meit through the town," feeding apparently at the tables of the burgesses turn about. Whether he was expected to provide music for the feast with his drum does not appear. Those who had not houses were to pay him 3s 4d per day for his food; and any who refused were to be poinded for double that sum. The piper was a functionary of older standing. In 1581 his remuneration was fixed at £5 per annum, but it seems to have increased. In 1600 it was stipulated that he was to receive "his dewtie usit and wont," and the drummer and he were to "pairt (or divide) the yule wages betwix them," this no doubt being some perquisite at the Christmas season. The "Kirkmaster" corresponded to some extent to our modern beadle. The "township" in 1578 ratified an act of the minister and elders directing that he was to be paid ijs for ilk marriage and xijd. for the baptisme of ilk substantious mann's bairn, vjd. for the simpl (simple, *i.e.*, common) folk; the kirkmaster fylland ane forme and buik to the brydgrum and bryd, and [certifying ?] thairin to the solemnizatioun, and haifand ane besein and towell to the baptisme." At a later appointment it is minuted that the kirkmaster is to ring the church bell, and also to "ring the burriall bell throw the toun when nytboris [that is inhabitants] deceisses, and to mak the graiffes, for the qlk he sall haiff of ilk deceisset honest man vjs viijd." The Council also appointed a "knok-keeper," or keeper of the clock, and to one holder of the office of kirkmaster, who would seem to have been in the building trade, payments were made, under the title of "wardane," "for the mending and uphalding of the kirk and for the tolbuith mending." Then in 1598 the court was equipped with an official corresponding to our procurator-fiscal. In that year Robert Bell was elected "pr. for the common weill, and he to expone, delait [prosecute], and reassoun upoun all effairis tuching the weill of this burgh and commounis of the same."

THE COUNCIL'S RELATION TO CHURCH AND EDUCATION.

The Council had even more intimate relations with the

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Church than those implied by the appointment of the beadle and the upholding of the fabric. In the year 1580, at the Michaelmas election, they appointed six "eldaris to the Kirk," to hold office for one year; but this appears to be a solitary entry of the kind. If they did not appoint the minister they regulated his income; in 1602 they stipulated to pay the Rev. Robert Glendinning £100 a year. And they did their best, according to their light, to secure him a congregation. An Act of the Council passed in 1596 imposed a penalty of forty pence on all persons who should "ban, sweir, curs, raill, or speik any evill or profane speichess contempteuselie, or flyte on the gait" (brawl on the street). It further directed that all the inhabitants should attend the Church services twice every Sabbath, "befoir and efter none," and should also "convene to the examinationis ilk day being advertissit," under a like penalty of forty pence for every absence. The "examinations" would be special diets fixed for the catechising of the flock by the minister; but there were regularly, in addition to the Sabbath services, two preachings on week days, Wednesdays and Fridays.

The Council also appointed the schoolmaster, and sometimes they conferred the office on the parish minister. Mr James Dodds was one of these reverend pluralists; and the Council and community, in whose name the appointment runs, undertook to pay him as schoolmaster a salary of twenty merks, with £3 additional for "chalmer maill," that is house rent, and he was to receive a quarterly fee of 12d "of ilk toun bairn that he leiris" (learns). A minute of slightly later date, and relating to the incumbency of a successor, shews that the recovery of the fees was sometimes a matter of difficulty. "And the toun bairnis to pay thair quarter feis afoir the terme, and gif they pey nocht within ten days efter the terme, the said James to expell thame furth of the scule." A successor in the ministry, Mr David Blythe, was also the schoolmaster, and it was stipulated that he should have under him "ane sufficient learnit doctor" as assistant. But the Council did not find the dual appointment satisfactory, and after a trial of sixteen months they discharged him "as schuill Mr, in respect they haid fund him insufficient to wait thairon, because of his office of ministrie and uthir effairis."

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PAYMENT OF THE BAILIES—CUSTOMS OF WINE AND SALT.

The work of criminal jurisdiction appears to have been left to the bailies. The dispenser of justice was considered not unworthy of his hire, and that hire took a very curious form. The Provost, Bailies, Council, and "haill communitie," assembled on the 18th of April, 1594, did statute and ordain "that ilk bailie and the common clerk of the town shall have, now and in all tymes cuming, at ilk meltat, [*i.e.*, meal], viz., at dennar and supper, ane quart of wyne of ilk schip that cummis within this port with wyne, so lang as the schip is in leiffing thairof, conforme to auld use and wont." Following upon this we have orders of the court upon protesting shippers to deliver over to each Bailie and the town clerk two quarts of wine for each of four days occupied in discharging the cargo, and decisions that burgesses of the town as well as strangers are liable for the impost. The magistrates and burgh officers were also entitled by old custom to a duty in kind on imported salt and on victuals generally. This is incidentally disclosed in a minute of 5th October, 1597:

"The quhilk day the Provost, Bailies, Counsall, and communitie of the said burgh, understanding that the bailzeis of the said burgh and officiaris of the same are diminishit of ane pairt of the old custome salt, has thairfoir statute and ordaint that the balyeis present and to cum, ilk ane of thame, sal haif for thair fyall [salary] yeirlie the soum of v. lib. [£5]; and appointis and ordains the officiaris to haif eqly [equally] amangis them, of ilk persoun that beis chargit in the tolbuithe, iijs, iiijd. [3s 4d] for trubil or uther occasioun, for thair fyall. But [without] prejudice awayis [always] to the peck of victuall appoint for thame for ilk boit [boat] that cummis in with victuall."

This arrangement had not, however, been satisfactory, and a year later an attempt was made to put things on a better footing by making the hard-worked bailies a present of the fines—"unlaws" they are called—which were recovered, and in consideration of this they were to give up their £5 salary. The minute bears that they were to receive "the unlaws of all bluids, bluidwytes [terms descriptive of assault to the effusion of blood], unlaws of straikis [common assaults, I suppose], deforcements, disobedience of magistraitis or officiaris in thair office, or injurious speichis to bailies or sik lik." This is a curious and comprehen-

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sive catalogue; but it does not appear to cover all cases for which fines might be imposed; for example, it does not at least in set terms extend to the class of offences of which we have just read — cursing, railing, and "flyting on the gait." At an earlier period (in 1584) the fines had been farmed out to William M'Ghie and Thomas Hall for £28.

Civil suits were disposed of in the burgh courts, frequently before an assize or jury. In one case, for example, concerning a charge of forestalling the burgh in purchasing a cargo of wine, it is recorded that "the Provost and Balyeis selectit the said former assysis, being unsuspect burgesses of the said burgh, to tak cognitioun and tryall thairanent." The proceedings were conducted with considerable formality, there being references to written pleadings. One Hercules Hay, an innkeeper, figures as pursuer in several actions. One of them was decided in the manner which still obtains in regard to prescribed accounts. It was referred to the defender's oath, "quha, being rypelie advysit thairwith," made oath that she owed him nothing, "bolt that it was all payit qlk sche ressavit; quhairfoir the judges absolvis hir simplicitir thairof." Hercules was a man of substance and laird of Castledykes, which he had let on lease to a brother. He sued that brother's widow for past due "maill," or rent, of the land, and also for delivery of certain personal property of his deceased brother, which he claimed as "airschip." It is curious to read in the inventory of the articles, along with a "pleuch, pleuch graith," and measures and implements of various kinds, such an entry as this: "Item, ane cuntar burde carvit, with tabill and ches, pryce ten merks." "Tabillis" is an ancient term for the game of draughts, and we have in the carved centre board, the "tabill," and the chess the necessary provision for still popular forms of fireside recreation.

The magistrates felt themselves burdened with the number of suits brought before them, and as a check to frivolous litigation it was enacted (February, 1580) that every pursuer who lost an action ("tynis" is the expression used) should pay a penalty of eight shillings. They were, nevertheless, jealous lest their tribunal should be deserted in favour of a rival jurisdiction, and another of the Burgh Acts provided "that na persoun indwellar within this burgh mak ony complent to ony out toun maister [magistrate?] for ony caus or occasioun, or move them to seik

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relief of the stranger [?]: but that they meine [*i.e.*, complain] thameselffis to the saidis Provost and Bailzies, the ordinar judges, ffor decisioun, and put order to qtsumever actioun, quarrell, or controversie thair fallis out betwix nychtbor and nychtbor; and duha deis in the contrair sall pay xl. lib. money of unlaw, tyne thair fredome, and be banishit the toun for evir."

BARBAROUS PUNISHMENTS.

Banishment from the town was a common form of punishment, and it was frequently accompanied by personal chastisement of a severe nature. Thus, on 17th February, 1588, John M'Come was sentenced to be "scurgit throw the toun and brunt on the schouder, and thairefter banishit the toun for evir," for "sundrie crymes and innormeteis," which are not particularly specified. At the same sitting of the court four women—Jonet M'Burnie, Kate M'Morrane, May Forsythe, and Jonet M'Lene—for "sundrie abhominabill crymes and evill deidis, qlkis wer notour and sufficientlie provin," were ordered to remove themselves out of the town "the morne, in the morning, with bag and baggage; and gif they failzie thairin, the saidis judges ordains thame, and ilk ane of thame, to be apprehendit and tane, and thaireftir the said day to be scurgit and brunt on thair schoulderis, as was practeisit on Johnne M'Come, but partialitie." In the same month another person was sentenced to be banished from the town "in respect of diverss his evill doings, leiding ane ill lyfe and conversatioun." In March, 1600, the Council enacted that breakers of the seventh commandment who were not able to pay the penalties imposed for their trespass were to have their heads "torkit" at the market cross on a market day, and were thereafter to be banished the town. Torking was a species of torture of the nature of pinching or puncturing.

TRADE IN WINE—INTERCOURSE WITH FRANCE.

In glancing at the trade of the burgh, one is surprised at the extent to which wine figures in it. This, of course, is due to the fact that Kirkcudbright was a port, and there was a good deal of intercourse with France and other parts of the continent. The frequency of this intercourse is illustrated by an agreement embodied in a record of the burgh court of the year 1581. John M'Cuffie, burgess of Kirkcudbright, and Thomas Masonn, burgess

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of Ayr, "Scottismen," thereby acknowledged to have received a certain quantity of wine from Anthony Sympsoun, merchant in Dieppe, who is termed a "Frenchman," but whose name suggests recent naturalisation, and they oblige themselves or their heirs to pay the price to him at Rochelle or Bordeaux, or in any other part of France where they might happen to meet him or any person having power to act on his behalf, before the Fastern's Eve next ensuing. This same Masonn and another burgess of Kirkcudbright consent to decree passing against them in the burgh court for a sum of about £2900 as the value of a cargo of wine and salt brought in a Dundee ship. We have references to trade with "the Isles," or Hebrides, from which salt was brought, and to the arrival of a ship "of Pittenweme" laden part with wine and part with iron.

A "FORESTALLER."

It was one of the privileges of the corporation of a burgh that it had a right of pre-emption on all goods brought to the market. To infringe this right was to forestall the town, and forestallers were sharply dealt with, as one Robert Edgar, a burgess of Dumfries, found to his cost. A cargo of wine had been brought to the port by Henry Osborne, a burgess of Ayr, and he offered it to the magistrates on behalf of the town at £90 per tun. It was refused at that figure, and the bargain seems to have hung fire. The vendor had apparently considered it "off" altogether, for he sold the wine to Edgar. Thereupon the magistrates proceeded against the purchaser as a forestaller. They offered to let him off easily by paying him whatever figure he had promised to buy at. But Edgar would not forego his bargain. He had reason to repent his obstinacy, for the charge against him was brought to trial before the magistrates and an assize of "unsuspect burgesses," who found him guilty; and the court declared the wine to be "confiscat and escheatit to our soverane lord's behove and thairis;" in what proportion is not stated, but it may be presumed that the town retained at least the lion's share of the prize.

FIXING THE PRICE OF WINE, BREAD, CANDLES, AND ALE—PERIODS OF SCARCITY.

In harmony with the spirit which animated the national legislature of the period, the Magistrates and Council inter-

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meddled in many matters which are now recognised as falling properly within the sphere of private enterprise and individual judgment. To fix the price of commodities was regarded as one of their ordinary duties. In 1582, for example, they directed that no Bordeaux wine was to be sold dearer than 3s 6d the pint, under pain of confiscation of the hogshead. "The assize of bread" was a regular institution in burghs; and in various minutes we find the price of an article variously styled "the caik" and "the quarter caik" fixed at eightpence. Occasional reference is made also to "the candill," which in two years is to be sold at 2s 8d per pound. The figures, of course, refer to the Scotch coinage.

But the most regular entry of this nature has reference to the "assize of ale." It was the custom in the month of October, when it had been ascertained what the nature of the harvest was, to fix the figure at which the ale, brewed from the oats grown in the district, should be sold during the succeeding twelve months. I quote in full a quaint minute on this subject. It relates to the year 1578.

"The qlk day the Provost, Bailzeis, Counsall, and commounitie, haiffand considderit the fertilitie of the ground this instant cropt and the cornis being weill collectit and gadderit, be ressoun of the gude harvist (thanks unto the Lord), haiffand also herd be report of utheris that nocht onlie this countrie but all the countries within this realme, and utheris without the same, also adjacent thereto, hes in lykeways prosperitie and welth of the saidis cornis; quhairby it apperis to thame na derth is like to be this instant yeir, and also herand tell that the aill is sauld in Dumfreiss for four penneis the pynt: Ffynds thairfoir that the aill may be sauld for iiijd. [fourpence] the pynt within this burgh, gude and sufficient: Thairfoir statutes and ordains that no oistlair within this burgh sell aill derar nor the said pryce for ane yeir, under the pane of xxs. [20s] for the first falt, and the nixt falt doubland, and the third falt tripland, and taking out also of the rest of the aill to the mercat croce, and to be delt thair to the pure [poor]: Provyding that it sal be lesum [lawful] to the saidis oistlaris to tak vd [fivepence] for ilk pynt qll [till] Setturday at evin nixt is: and ordains the Deane to pas with diligence to the countrie and put siklyke ordeir to the oistlaris therein."

The thankfulness expressed for the abundant harvest and the

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safe in-gathering may in this connection raise a smile. But we must bear in mind that the state of the corn crops was at that period a matter of the most vital concern to the whole community. Deficiency meant not simply the possible inconvenience of a slight rise in price; but, if the shortcoming were serious, it involved literal famine. There was no potato crop on which to fall back; foreign countries could not redress the balance by sending of their surplus; and the means of internal communication were so limited and slow that a supply would be obtained with difficulty even from other parts of our own country which might have been less affected by an adverse season. In these circumstances periods of scarcity, more or less general, were of frequent occurrence in both Scotland and England. No wonder, then, if the community were devoutly thankful that for one year at least they were free from fear of dearth.

This was the last of a series of fat years. In 1579 the lean cycle began with a rise to sixpence. By 1595 the price had trebled, the pint then selling at twelvepence. Scarcity and high prices, operating on human cupidity, had the usual effect of leading those who had supplies to hold them back in the hope of reaping still larger profit from the greater extremity of the community. Penalty clauses were inserted in the annual Ale Act to check this practice. The minute of 1559, for example, directs that "na oistlar reteine aill in their huss abone ane galloun, but sell the same to all nychtboris, gude and sufficient, under the same pane [£5], deiling of the aill at the croce [giving it away, that is, to the populace], and discharging [that is, forbidding them] of forther brewing." Those years of distress synchronise with a similar experience throughout the country. The year 1597 in particular is emphatically characterised by Professor Thorold Rogers, in his valuable book on "Work and Wages," as one of "fearful famine" throughout England; and the following year was remarkable in Scotland for the general blighting of the crops.

FREQUENT OCCURRENCE OF "THE PEST."

A terrible accompaniment of recurring famines was "the pest," or plague. There was in the burgh an hospital known as "the Pest-house." We find the Council on the alert to prevent the introduction of the malady from other places. On 22nd

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January, 1577—or, according to our present calendar, January, 1578, for the legal year was then reckoned from 25th March—order is made that "nane within the burgh travell nor trafik in Ingland, nor on the bordouris thairof, for the pestis causs [because of the pest], qlk is in the saidis bordouris, under the pane of tinsall of thair fredome; and that nane reset ony travellaris out of Ingland, nor bordouris thairof, without ane sufficient testimoniall, under the pane of ten punds."

In 1585 Kirkcudbright itself had been visited, On the 9th of March, 1586 (1585 according to the reckoning of the period), the Council made arrangements for payment of fees due to "the clengeris," these being persons employed to use means for the recovery of those afflicted with the plague. The town lands of the Borelands and Millflat were then let out to the burgesses in "skairs" or small plots; and in order to raise the necessary money the Council directed that each holder of these lands was to pay two years' rent in advance. They were more peremptory in their demand than a modern Chancellor of the Exchequer, for they enacted that the money should be paid over to the collector "betwixt and the morne at evin," under pain of their skairs being declared "vacant and in the toun's hands." In October of the same year the Council voted an honorarium of five merks to "Jonet Mertene," for "certane plesirrs and guid service done" by her "the tyme of the pest, and for hir help."

Some years later the Council were in dread of a return of the pestilence, which had broken out in a neighbouring town. They cut off all intercourse with the afflicted place, and turned the whole householders into a body of watchmen to see that the cordon was not broken. These precautionary measures are set forth in these terms, under the date 20th April, 1599:

"Understanding the pest being now ill in Drumfreis, and willing na resorting or traffik be betwix the said tounis for feir thairof, statutis and ordains that the haill inhabitants within this burgh that reasis reik thairin [a graphic expression designating a householder—the possessor of a hearth] wache in thair awin persoun, or ellis ane als [as] sufficient in thair steid, at the sicht of the Bailleis, under the pane of xls. ilk fault and tynsall of their fredome; and that nane hant or gang to Drumfreis, or benethe the watter of Ur, or resset ony benethe said water, under the said pane, without consent of the Bailleis."

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"WATCH AND WARD"—A FEAR OF INVASION.

In another minute dealing with the duty of "watch and ward" we seem to hear an echo of the fears of Spanish invasion which haunted the country even after the days of the Armada, while Scotland was distracted by the intrigues of noble factions. It is of date the day before Christmas, 1595, and it made order that watch was to be kept nightly by six armed persons to be chosen for that purpose by the bailies. Negligent watchmen were to be punished "in the stokis or gorgattis;" and their "puttar furthe" (the person, we presume, who had sent a negligent substitute) was to pay a fine of forty shillings. And "in case of ony tumoult or uproar in the toun, ilk persoun to be in reddiness, at ane schout or clink of the comoun bell, to ryss and cum to the gait boidint with wapponis, under the pane of tynsall of thair fredome and banischement of the town for evir, and also under the pane of ten pund of unlaw."

AMUSEMENTS.

We have already seen that the worthy burgesses of the sixteenth century relaxed themselves indoors with draughts or chess. Of the fondness of the young men for athletics we have incidental evidence in several of the minutes. In 1597 the grass of the Friars' Kirkyard—that is the burial ground of the old church that stood where the castle now is—was let to Thomas Hall on a nineteen years' lease, subject to these conditions, among others: that he was to build and maintain a dyke around it, but was to leave a style and door, which should be "patent" all day, but locked at night, "and it sal be lesum to the toun and young men thairof, to big buttis thairin and use archerie, and to repair and gang thairintill, as they haif occasioun: secludane [excluding] all players of futeball, cache-kyllis, and uthir games out of it, bot allanerlie [only] the buttis." "Cache-kyllis" may be a local term for a primitive form of lawn tennis, which in old Scotch was termed cache-pole or catch-pule. Archery butts or targets seem to have been provided elsewhere; for in February, 1579, a disposition was granted to Robert Hall, burgess, of certain common land "beneth the toun and at the buttis." The churchyard seems to have been a popular resort for purposes of recreation. In an earlier minute (of 1580) we find a prohibition against the playing of "keich-ball upon the Freir Kirk, for demolishing the sklait thairof."

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EARLY CLOSING OF ALE-HOUSES.

The civic rulers of those early days were alive to the importance of regulating the business of the ale-house keeper in other ways than fixing the price of his goods. It was an offence to be drinking in such a house "after ten horis at evin," and the penalty fell not on the keeper of the house but on his customers.

FORBIDDING USE OF BUTCHER-MEAT.

A curious enactment of a sumptuary character appears, with variations, in minutes of 1580, 1589, and 1595. Its purport is to forbid the eating of butcher-meat either on Friday or Saturday. "Oistlars," as the innkeepers are termed, are forbidden to "roist or seith" flesh on either of these days, and the owner of a house in which any is used is to be fined five merks. One of the minutes bears that the purpose of the prohibition is for the "down-putting of dearthe." An Act of the Scottish Parliament of earlier date (1567) had forbidden the eating of flesh on three of the days of the week, for the vaguely expressed reason that "it is great hurt to the common weill of this realm, the indifferent and dayly eating of fleshe within the same."

THE BURNING OF A WITCH.

A superstitious belief in witchcraft possessed all classes of the people during the period over which this period extends. I have found no trace in the minute book of the cruel persecutions to which it gave rise. But there is extant an account of the Burgh Treasurer of Kirkcudbright for the year ended at Michaelmas, 1698, which throws a lurid light on this dark page of history. It contains a long list of items referring to the execution of a poor woman, Elspeth M'Ewen, belonging to Dalry, against whom the Kirk-Session of that parish instituted a prosecution on the accusation that she possessed and exercised the power of the evil eye. A special commission was issued to the Steward-Depute and various lay commissioners to try her, with a jury, at Kirkcudbright; and on their sentence, confirmed by the Privy Council, she was given to the flames. We seem to hear them crackling and to see the tortured flesh shrinking as we read such callous entries as these:

Item for peits to burn Elspeth wt.	j	0	0
Item for twa pecks of colls	0	16	0

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Item for towes [ropes to tie the poor creature to the stakes], small and great	0	4	0
Item for ane tar barle to Andrew Aitken	j	4	0
Item to Hugh Anderson for carrying of the peits and colls ...	0	6	0
Item to William Kirk [the executioner] qn she was burning, ane pint of aill	0	2	0
Item payed to Robert Creighton, conform to precept, viz. :— eight shillings Scots for beatting the drum at Elspet M'Queen's funerall, and to James Carson, his wife, threeteen shillings drunken by Elspet's executioner, at seall times	j	j	0

The executioner was on the regular staff of burgh officials, and in receipt of a weekly allowance; but in his old age he had eked it out with the seeking of alms, and the tragedy just recorded by attaching increased odium to his office seems to have cut off supplies. In a pitiful petition to the Council he represented that when he went to the country the people bade him go home to the town "and cast stanes at me," and to relieve his indigent condition the Council made him a special grant of six shillings Scots.

III.—"*The Etymology of the Word Ruthwell.*" By E. J. CHINNOCK, LL D., London.

I was deeply interested in reading the paper on Dr George Archibald's sketch of Dumfries in the seventeenth century by my lamented friend, the late Dr James Macdonald, in whose death Scotland lost one of her best antiquarian scholars. The old Dumfries physician in his "Account" gives two derivations of the name Ruthwell, upon which a discussion arose among the members of the Society present at the meeting at which it was read. I hope it will not be thought presumptuous on my part if I continue this discussion, with the desire of throwing some light upon the subject. There are six derivations assigned to the word, as far as I can gather, two of which are manifestly absurd, and therefore ought to be at once discarded. Let us take them in order:—I. The first is that which the worthy Archibald assigns, and which I have never before seen—*Ruthae vallum*, "Ruth's wall" He says that the Saxons erected it as a rampart, and that they never advanced further than this point in Scotland. This derivation and statement is so childish in its simplicity and ignorance that it is not worthy

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of a minute's notice. Who was Ruth? Evidently a female, from the declension of the name, and doubtless the apocryphal person called also St. Ruth. History evidently was not Dr Archibald's forte, or he would have known that the sixth kingdom of the Saxon Heptarchy, called Northumbria, extended as far north as Fife including Dumfriesshire and a part of Galloway, and that Edinburgh was founded by the greatest of the Northumbrian kings, Edwin, to be the northern capital of his kingdom, as York was the southern. Lowland Scotch is simply the old Northumbrian dialect of the English language, as modern English is derived from the Mercian or Midland English. II. The second derivation, dear to those ignorant of philology, is *St. Ruth's Well.* It is always stated that this explanation of the words is due to Bishop Gibson, of London, in his edition of Camden's Britannia, published in 1695. He speaks of the church of Ruthwell, calling it *St. Ruth's* church. The worthy bishop was evidently only giving the local derivation, for we find Dr Archibald, in his "Account," speaking of "St. Ruth's Church, called Ruth*wall.*" Archibald, it seems, knew nothing of Ruth*well.* We may conclude, I think, from this that in his time it was called Ruth*wald* and not Ruth*well.* So far as I can learn there is absolutely nothing to connect Ruthwell with St. Ruth, except that *Ruth* is the first syllable of *Ruthwell.* Men of the critical acumen of Messrs Barbour and Cairns may well express doubt of these two origins of the name. III. The third derivation is that assigned by our learned president, Sir Herbert Maxwell—the *Rood-well.* There is at Ruthwell a celebrated Cross, and there is the well-known *Well* in the parish. The obvious inference, then, is that the name of the parish is derived from the cross and the well. If nothing better can be found this ingenious explanation must be accepted. But the practised philologist puts it aside as too simple and evidently a concoction. The settlement of the question requires research into the old English, Gaelic, and Norse languages from which our place-names are derived. IV. Chalmers in his "Caledonia" gives the derivation *ruth*, a rivulet, and well a corruption of *wald*, which is our modern *weald* or *wold*, a *wood.* He says there is a *rith* or rivulet in the parish. I know not whether this is so or not. But I am certain that so very common a thing as a rivulet in a parish would not give its name to that parish. I think, however, he was right in his statement that *well*

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is a corruption of *wald*. The four foregoing derivations of the name, I think, must be pronounced fallacious and futile. I believe the real origin of the word will be found in one of the succeeding conjectures, my preference being given to the last, which I believe to be my own, founded on the labours of others. V. The name *Ruthwell* first appears in a charter of date 1605. In the 17th and 18th centuries the name varied between Ruthwald, Ruthwall, Ruthwell. I was informed by my friend, Mr A. L. Davidson, last year that a native has, even at the present time, his cart labelled Ruth*wald*. It is pronounced locally, as Dr Ross pointed out, *Rivvell*. Indeed, in the early charters of the Murray family, to whom the Parish belonged, I believe, the name of the Parish appears as *Ryval*, *Rivel*, or *Revel*, evidently the local pronunciation of the name. As I am ignorant of Gaelic, I applied to my friend, Dr H. C. Gillies of Hampstead, the author of a Gaelic grammar, and one of the leading members of the Gaelic Society of London, to see if he could throw any light upon the subject. He wrote:—"I find that there is a *spa* some little distance from the village, and this would prejudice in favour of a *well*. Why *Ruth*well? There is room for a Gaelic suspicion, if it is a chalybeate or iron well. This would make it the *red*, *ruddy* from *ruadh* (Gaelic) *rhudd* (Welsh), pronounced *ryth* or *rith*. The Welsh form would explain *Ryval*, its old name. But this old name throws doubt upon the *well* idea, and rather tends towards the *vald* or *wald* form, which appears in Mouswald and Torthorwald in the same dale. In fact the form Ruth*wald* appears to have been up till lately in use. There is distinct proof of the Norsemen in Annandale, and the older forms have a suspiciously Norse look about them. In fact the Tinwald, Torthorwald, Mouswald almost push us on to a Ruthwald. In that case the origin must be sought in Norse." The fifth derivation then is *Ruth*-well, the *Red*well. I believe, however, that Chalmers and Dr Gillies are right, and that the second syllable *well* is only a corruption of *wald*. VI. I beg to submit to the judgment of the Society my own conclusion, which is that the words means the *Redwold*. The corruption of *wald* to *well* through *wall* (see Archibald's "Account" and consider the form *Ryval*) is a very natural and easy one. The other corruption of *well* into *wald* is unnatural and difficult, and would be rejected by all philologists. The word may be derived from the Norse, as Messrs Cairns and Gillies suggest, or from the

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Anglo-Saxon. We know that the Norsemen did settle in Dumfriesshire, and on the banks of the Solway, and there are several traces of them still existing in local names and customs. *Ruth* is allied to the Gaelic *ruadh*, Welsh *ruddh*, Anglo-Saxon *read* (red) and *rudu* (redness), German *roth*, Dutch *rood*, Danish and Swedish (derived from the Norse) *rod*. *Wald* is a good old Anglo-Saxon and Norse word meaning a *wood*. The German still has *wald*, and the English has *wold* and *weald*. How could the district have obtained the name of the Red-wood or Ruth-wald? In those early times pine woods prevailed throughout that part of the county. The Scotch fir or *red* pine predominated. I think we may discover the origin of the name from this fact. The place was known as the Red-pine Wood. I submit this conjecture to the judgment of philologists for what it is worth.

Botanical Notes for 1899. By JAMES M'ANDREW, Assoc. of Edin. Bot. Soc., New-Galloway.

I much regret that my botanical notes for 1899 are even more meagre than those for 1898. This year my new records are almost *nil*. In last July I spent a fortnight in Kirkcolm parish, north of Stranraer, in the expectation of perhaps finding a few Ayrshire plants likely to be carried across the entrance of Loch Ryan, but in this I was disappointed. In fact, except along the shore on both sides of Corsewall Lighthouse, the parish of Kirkcolm is not productive of wild plants, being too agricultural for a botanist's purpose. The only new record I have to give for Wigtownshire this year is *Scirpus Tabernæmontani*, Gml., which I found in two lagoons on the shore opposite Kirkcolm village. For the sake, however, of future reference and guidance, I shall mention some of the rarer Wigtownshire plants I saw in Kirkcolm and Leswalt. Round Kirkcolm village and the neighbouring shore I saw *Bromus sterilis*, Linn., *Rumex alpinus*, Linn. (Monk's rhubarb), *Carduus tenuiflorus*, Curt., *Ranunculus sceleratus*, Linn., and *Bulbosus*, Linn., *Ballota nigra*, Linn. (an outcast), *Hyoscyamus niger*, Linn. (henbane), *Equisetum maximum*, Lam., *Ruppia rostellata*, Koch (in lagoons on the shore), and *Catabrosa aquatica*, Beauv. (in ditches near the shore). The only rare plant

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I noticed in Corsewall grounds was the grass *Calamagrostis epigeios*, Roth, which grows at the north end of the wood in plenty. I have already recorded it from two stations near Portpatrick. The lichen *Endocarpon miniatum* was very plentiful on the rocks along the edge of the wood. From Corsewall Lighthouse eastwards are found the common littoral plants. *Ligusticum scoticum*, Linn., was in plenty, but the rarest plant I saw on that shore was *Sedum roseum*, Scop. (roseroot), found in two places. The only other station I know in Wigtownshire for this hill plant is at the mouth of the Craigoch Burn, Portpatrick. The Hepatic, *Riccia glaucescens*, Carr, was seen here in abundance. *Orchis latifolia*, Linn., *Sagina nodosa*, Fenzl., *Avena pubescens*, Huds., *Radiola linoides*, Roth, *Pulicaria dysenterica*, Gærtn., &c., were other uncommon plants along this shore. In Dally Bay, on the west shore, the two best plants seen were *Catabrosa aquatica*, Beauv., in abundance, and *Geranium pratense*, Linn., in fair quantity. With the exception of some plants of this Geranium in Galloway House grounds, found by the Rev. James Gorrie, Sorbie, the only other station I know for it in Wigtownshire, and there only as a single plant, is at High Drummore. It may be incidentally mentioned that *Geranium sylvaticum*, Linn., has not yet been recorded for Wigtownshire. About Moffat, for example, both species are very common. In Aldouran Glen and about Lochnaw I saw abundance of *Stellaria nemorum*, Linn., recorded by Mr G. C. Druce, as also *Melica uniflora*, Retz., and *Phegopteris polypodioides*, Fée (beech fern). These I did not notice on a former visit to Lochnaw. I may mention that the other Melic grass, *Melica nutans*, Linn., has not yet been recorded for Wigtownshire. *Galium mollugo*, Linn., grows in several places near Leswalt.

KIRKCUDBRIGHTSHIRE.

I found *Luzula albida*, as an escape or an outcast in the woods of Corsock House. The moss *Thuidium delicatulum*, Mitt., I found this summer in Glenlee Glen and other places, and very probably it is quite common. Now that attention has been directed to this moss, it has turned up in many districts of England and Scotland.

In conclusion, I may refer to the excellent discovery last summer of the Northern Holy Grass, *Hierochloe borealis*, R. & S.,

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on the Rerrick shore, by Miss Mittelbach, Orroland, determined by the Rev. G. M'Conachie, Rerrick Manse, and confirmed by Professor Balfour, Edinburgh University. Mr Arthur Bennett, Croydon, has a note on this grass in the October "Annals of Scottish Natural History."

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FIELD MEETINGS.

12th June, 1901.—Glencairn.

The first field meeting for the season of the Society took place on Saturday, June 12, 1901, and proved to be one of the pleasantest and most interesting in its recent annals. The excursion was to the lower end of the parish of Glencairn, where the party inspected the British camp at Snade, and were during the afternoon the guests of Mrs Martin of Dardarroch and her family; and the return drive was made by way of Lag Glen, with passing calls at Brockhillstone and the ruined tower of Lag. Brilliant sunshine favoured the outing. Passing the Druidical circle in Holywood, it was compared with the drawing given by Grose, of date 1789, and the absence was remarked of the twelfth stone shewn in the picture. At Dunscore Dr Martin, of Holywood, who had arranged the programme of the day, took up the role of guide. Quitting the high road and crossing the Cairn by the footbridge, near a marshy spot where the curlews seem to nest, the company proceeded first to the site of the old castle or baronial residence near the farm-house of Snade, which is indicated by some foundation remains and more tangibly by a grove of ancient yew trees, a couple of which were measured and found to be ten feet in girth at a height of three feet from the ground. The yews have pretty well encircled the house, except on the northern side, and part of them are planted in a double row, so as to form an avenue by which the main entrance would be approached. In the year 1665, or at a slightly earlier date, the barony of Snade was divided, half of it going to swell the possessions of John Laurie of Maxwelton. The other half, on which the baronial residence had stood, would seem to have been acquired by Walter Riddel of Minto, a member of an old Roxburghshire family, who impressed upon the property his own name by styling it Glenriddel. The son of this John Laurie was Sir Robert, the first baronet of the Maxwelton line, who figures in history as one of

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the persecuting group of Dumfriesshire lairds, but of whom a more fragrant memory survives as the father of Annie Laurie of the song. Her mother was a Riddel—daughter of this Walter of Minto and Glenriddel. A later memorable conjunction of the families occurred when Captain Robert Riddel, at his house of Friars' Carse, engaged in a bacchanalian contest for the "Whistle" with his relatives, Sir Robert Laurie and Fergusson of Craigdarroch. In the interval two members of the family had figured on opposing sides in the Jacobite rising. The Rev. Simon Riddel, minister of Tynron, led a party of his parishioners in the Royalist army at Sheriffmuir. His relative and family chief, Riddel of Glenriddel, supported the luckless Stewart cause, and was one of the fourteen hundred prisoners taken at Preston. The Captain Riddel of the Burns period and of the whistle contest was the last of the family who owned Glenriddel. It was sold in 1792, two years before his death; and Friars' Carse, where he had lived, was put in the market by his testamentary trustees. His younger brother, Walter Riddel of Woodley Park (Goldielea), an equally intimate friend of the poet's, is represented in the government of the country at the present day by a great-grandson, Mr G. D. A. Fleetwood Wilson, C.B., assistant under-secretary of the War Department.

On the farm of Snade, and lying nearer to the river, between the farmhouse and that of Boreland, is one of the most perfect examples of a British camp to be found in the district. The double earthen rampart and two ditches are wonderfully entire, and enclose a large circular space upwards of a hundred feet in diameter, forming a saucer-like depression within these lines of defence. The total area extends to 1,608 acres. Seedling oaks grow profusely in the neighbourhood, and the camp is covered by young wood of that species and birch and hazel, which has no doubt contributed to its preservation.

Dardarroch was reached shortly before two o'clock. Here a most hospitable welcome awaited the party. They were received by Mrs Martin, with whom were her daughter, Miss Martin; her sons, Mr Robert Martin, Mr Samuel Martin, W.S., Mr Henry Martin (lately returned from service in South Africa with Lord Strathcona's Horse), and Dr Martin—and Miss Hair of Fleuchlarg. Luncheon was dispensed on the lawn, under the shade of a fine copper beech and other trees. Then an adjourn-

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ment was made to the house, where a wealth of interesting objects claimed attention. There is a very complete and finely-mounted collection of native birds, with a few rarer visitants—including the Pied Fly-Catcher and the American White-Winged Cross-bill; among many other specimens, the Night-Jar; the King Fisher; the Water Rail, Tufted Duck, the Goosander, which frequents the valley in large numbers; and a few birds shot further afield, one being a fine Capercailzie, from Perthshire, which weighed 11 lbs. The family possess an extensive tract of cattle ranching and timber land in Manitoba, and in the rigorous north of Canada they have had good opportunities for indulging at once a sportsmanlike instinct and a taste for natural history. Quite recently Mr Henry had undertaken a long canoe expedition up the Great Slave Lake, to the remote stations of the Hudson Bay Company, in connection with reported discoveries of gold, which, however, turned out to be disappointing. Among the trophies of the chase which adorn the walls are two magnificent heads of the Moose, with its great flat horns; masks of the large and fierce Timber Wolf from Alberta and of the smaller fox-like Prairie Wolf; such notable birds of the colony as the Snowy Owl, the Eagle Owl, the Goshawk; and hoof of the Carriboo. There is also in the collection a fossilised tine of the antler of the Wapiti Deer, from the Rocky Mountains. Collections of butterflies and moths, both British and Canadian, and samples of West African avifauna further enhance the interest of the museum; and there are in it not a few objects of antiquarian interest. One of these is a piece of oak carved with the date 1689 and the initials "D M" "I K," being those of David Martin of Braco and his wife, Jeane Kar. David was a stout old Covenanter, who fought at Bothwell Brig, and, having the good fortune to escape unhurt, remained in hiding in the moors and mountains until the Revolution. He had possessed some skill of handicraft, and himself carved this heirloom. Of more recent interest were one of the 1-lb. shells of the Vickers-Maxim, the "Pom-Pom" of the Boer campaign, which has had such a disturbing effect on the troops, and a set of the last coinage of the Transvaal, both gold and silver, with the image and superscription of Paul Kruger. Into the outer wall of Dardarroch House are built several carved stones that have come from an older building. One of these bears the arms of the Cunninghams, Earls of Glencairn, the Y-shaped shakefork, and the initials "I C."

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From the fields above the house a very fine prospect was obtained, along the valley of the Cairn and the encircling Stewartry hills, and down the Lagg Glen, and there was noted a great stone cairn, partly demolished, which is understood to mark an ancient place of burial. In one of the lower fields is a giant oak embedded in the earth, where it had fallen ages ago.

A short business meeting was held at Dardarroch, when Mr John Houston of Brownrigg, Dr Semple, science master of Dumfries Academy, and Mr Waddell, headmaster of Loreburn Street School, were admitted as members of the society. Tea was then handed round on the lawn, and Mr Barbour, architect, vice-president of the society, expressed to Mrs Martin and the members of her family the great indebtedness of the members for their kind invitation and generous hospitality and for the opportunity afforded them of seeing the varied and extremely interesting collections.

On the return drive a halt was made at Brockhillstone in order to examine a large boulder from which the farm presumably takes its name. It is of coarse porphyry, and was computed to weigh fifteen tons. The most natural hypothesis is that it was dropped from an iceberg which helped to furrow the valley in the glacial age. The origin of the name is more puzzling. The locally accepted explanation is that the little hill on the side of which it rests was a generation or more ago infested by badgers, or "brocks," and came to be known as the brocks' hill. In a cottage garden on the farm is a wonderful little fernery, comprising a number of rare varieties, all of healthy growth, and adorned with numerous querns and a quaint sun-dial face, dated 1680, and having on it the initials "I W," "M F." Both the ferns and the antiquities represent the gathering of the late Mr Andrew Laurie, builder, a man of cultivated taste.

A brief inspection was made of the scanty remains of Lag Tower, of which the persecuting Sir Robert Grierson was, it is believed, the last occupant, and who also, there is reason to believe, was born within its walls. It has been a square keep, roughly built of unhewn stone, and with enclosing wall and arched entrance. The grim baronet had left it long before his death, first for Rockhall, afterwards for a house in Dumfries. The latest minutes of the "court of the barony," at which the baron bailie

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dispensed justice, shew that it was held in 1731 at Gateside of Allanton. The ruin has received a good deal of attention in the way of facing the corners with dressed stone and pointing for purposes of preservation. The Wall-Rue grows freely in the crevices of the mouldering masonry.—*Dumfries Standard.*

21st September, 1901.—Lochrutton.

A party of the members visited Lochrutton on Saturday afternoon, 21st Sept., 1901, to examine the progress of the excavation of the crannog at Lochrutton undertaken by the Society, under the supervision of Mr James Barbour, architect, who accompanied the party. They had also the advantage of the company of Dr Munro, of Edinburgh, the leading authority on the subject of lake dwellings, and author, among other works, of "The Crannogs of Scotland," "The Lake Dwellings of Europe," "Prehistoric Scotland." They were joined also by Mr Grierson, farmer in Moat of Lochrutton, whose antiquarian tastes have led him to take an intelligent practical interest in the work, and who placed his boat at the service of the visitors. The boat of the Water Commissioners was also impressed into their service.

The loch, from which Dumfries and Maxwelltown derive their water supply, is about 250 acres in extent. The crannog island is almost exactly in the centre. It is a rounded hummock of stones and earth overgrown with young trees, and is a pretty object on the surface of the water. Around its edges there have long been exposed upright wooden piles and some tree trunks lying horizontally. Two trenches have been cut through the island at right angles to each other and intersecting at the centre, right down to the water level of the loch as it was found on Saturday. This level was considerably higher than it had been for some time, for the digging was begun when the loch was shrunk by the long drought, and the heavy rains had raised it by two feet on the previous day. And the winter level will be several feet higher. Just above the surface of the water as it was on Saturday there has been disclosed a floor composed of

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undressed tree trunks laid closely together, different sections running in directions transverse to each other. The oak tree has been extensively used; also the birch and the alder. One birch trunk was noted still covered with bark wonderfully fresh in appearance. A hole cut in it and a prepared beam indicate that the structure has been pinned together by the mortise-and-tenon device. An outer ring of piles has formed a stockade for the protection of the artificial island. It has thus been made clear that the crannog is of the kind most common in this country, and the construction of which is succinctly described by Dr Munro in his most recent work, "Prehistoric Scotland."

Gradual subsidence is to be expected in the case of a structure founded upon a more or less unstable bottom and compacted of more or less compressible and perishable materials. Traces of as many as half-a-dozen hearths, one above the other, have been found in various crannogs, indicating that the original floor has been overlaid by a succession of others. In the Lochrutton case there has obviously been a considerable sinking. The floor which has been exposed is several feet below the present winter level of the loch, although the loch has shrunk to some extent within living memory, and the probability is that older floors may exist beneath it. Little heaps of charcoal and several small fragments of brown pottery are the only domestic relics which have been unearthed. Formerly, we understand, when the island was a barren resort of gulls, fragments of bone could be picked up in wonderful profusion. These have been incorporated into the substance of the trees which now luxuriate upon it.

Lake dwellings have existed over a wide area of continental Europe as well as in the British Isles. In recent years remarkable discoveries have been made of submerged villages in Swiss lakes, the existence of which is attested by forests of piles, which had supported the huts, in a manner still perpetuated in various parts of the world, including South America and the East Indies. In Britain the common form was that of the crannog or artificial island, constructed usually in the manner above described, but sometimes in large measure of stones, and often probably having as a nucleus a small natural island or submerged rock. They abound in Dumfriesshire and Galloway. The Antiquarian Society has in past periods of its history investigated to some extent crannogs in the Castle Loch of Lochmaben, at Sanquhar, at Clon-

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yard in Colvend. There is probably not a loch of any size in the district that has not one or more. A friend who has devoted some time and pains to inquiry on the subject informs us that Lochaber is the only one near at hand where he has failed (as yet) to find them. There is a beautiful one in Loch Kindar; a large and most interesting one in Loch Arthur; others in Milton, Auchenreoch, Loch Urr, &c. In Colvend at least three of the lochs have crannogs. The drained Cloak Loch has a rather unique structure which may be classed with them. It is placed on the solid natural rock. In the case of Lochrutton some circumstances suggest that the crannog now under consideration (and of which the area has not yet been determined) was one of a group which dotted the loch, at a time possibly when its area was more extensive than it is now. The promontory on the Lochside shore, opposite the crannog, has obviously been a place of strength or residence. A trench has been dug upon the landward side, which would convert it into an island in a high state of the water; and it is protected on that side by a bank thrown up from the cutting, and on the water side by a facing of large stones. Bones and teeth of cattle have been got on the promontory plentifully in dry years. Similar finds have been made on the "Wee Island," towards the west side of the loch. Within the last ten or twelve years that island has become covered with brushwood, &c. Previously it only became exposed in dry seasons. A small group of stones has in quite recent years appeared in dry seasons nearer to the outlet of the loch than the crannog, and has received the name of "the Laird's Isle." These, there is good reason to believe, are the remains of the top of a crannog, which has been washed away and probably destroyed by wind and waves. The "Moat of Lochrutton," a very extensive earthwork north of the village of Lochfoot, gives name to the neighbouring farm. Upon it "hearths" and other remains are constantly found during ploughing. At the south-east base of the Moat were found some years ago upright and cross oaken piles mortised together, which are now in Mr Grierson's possession. These probably formed some prehistoric structure. Part of a prehistoric canoe, dug out of a field on the neighbouring farm of Armannoch, did duty some years since as the cover of a well on that farm, and is possibly there yet.

For what purpose were these mysterious dwellings raised,

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with the great labour they must have entailed? For purposes of protection, is the ready answer. They would afford a protection when beset by hostile tribes. But we must remember that it was not only from human enemies that the early Briton needed protection. It is not certain that the bear survived in Scotland beyond the sixth century of the Christian era; but individual survivals of the wolf were met with until within a few years of the Revolution that put William of Orange on the throne, and in earlier centuries they would roam the forests in ferocious packs. An Act of the Scottish Parliament of 1580 required that the Sheriff and Bailie "hunt the wolf thrice in the year, betwixt St. Mark's Day and Lambes, and that the country rise with them for that end." Families left on an island habitation would be safe from their attacks while the men of the tribe were following the chase at a distance or out on the warpath. The crannog in all probability was a place of ordinary residence, not merely of occasional resort. It is understood that it was usually wooden huts which were erected upon them; but indications of rude stone buildings have been found on some of them; among others, in one at Ravenstone, in Wigtownshire. And the numbers of comparatively large stones overlying the Lochrutton crannog cannot well be accounted for on any other theory than that they had been used in the construction either of a dwelling or an encompassing wall.

That the crannogs belong to a remote past there can be no doubt; but data are awanting to fix their age with any precision. Dr Munro has formed the opinion that they are all more recent than the Roman occupation of Scotland, and that many have been occupied until a comparatively recent period. Considerations of convenience and conservatism of habit would no doubt prevent them from being deserted until long after the original necessity for them had passed away. Hence articles which may be found in them are not necessarily an index of the period in which they were constructed.

The ordinary means of communication with the mainland would, of course, be by canoe; but in many instances a submerged road has been traced, to which the term causeway has been applied. The gentleman to whom we have already alluded and a friend satisfied themselves, twenty-four years ago, that there were distinct traces of such an approach from the promon-

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tory to the crannog in Lochrutton. It was a very winding road, and would be intentionally made so in order to bar its use to any uninstructed and presumably unfriendly visitor; and the person walking on it would probably be breast-high in the water. The present depth of the loch around the crannog is from twelve to fifteen feet.—*Dumfries Standard.*

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SESSION, 1901-2.

18th OCTOBER, 1901.

ANNUAL MEETING.

The Rev. JOHN CAIRNS, M.A., in the Chair.

New Members.—Mr William M'Cutcheon, B.Sc., Assistant Science Master, The Academy: Mr Laidlaw, Plasterer, Lockerbie.

Donations and Exchanges.—Annual Report of the Barrow Naturalists' Field Club for 1899. Communications of the National Museum of Buenos Ayres, 1901, Vol. 1. Proceedings of the Nova Scotia Institute of Science, X., Part 2. The Session Book of Bunkle and Preston, 1665-1690, printed for the Berwickshire Naturalists' Club. Annual Reports of the Smithsonian Institute for 1897 and 1899.

Exhibits.—Dr Martin, Holywood, showed (1) specimen of a Lamprey (Petromyzon marinus), caught on the rocks at East Cluden this summer, 22 inches in length, and evidently a female: (2) male and female purple saw fly (Sirex purpureus), taken at East Cluden in August of this year; (3) white variety of Knapweed (Centaurea nigra), found in a field at Upper Cluden; and (4) Phallus or Stinkhorn in fluid, with section to show the bursting of the young phallus and its relation to the older plant.

Mr Moodie, on behalf of Mr James Barbour, exhibited the following articles, discovered at the bottom of the fosse of Comlongon Castle which had been recently excavated, (1) a

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dagger, (2) an axe head, and (3) shoe of a pony, with enormous nails.

Mr Moodie proposed a vote of thanks to Lord Mansfield and Mr Johnstone-Douglas, through whose kindness Mr Barbour had obtained the articles for exhibition.

A letter was read from Mr James M'Andrew, Assoc. Bot. Soc. Edinr., New Galloway, intimating his resignation as a member of the Society. The Rev. Mr Andson expressed the great regret of the Society at the loss of Mr M'Andrew's services, and their high appreciation of the help he had given the Society by his numerous contributions to the Transactions in the Department of Botany. He moved that they enter in their Minutes an expression of their sincere regret at his removal from the district, and their high appreciation of his valuable and important services rendered to the Society; and further, that in token of that appreciation they appoint him an honorary member. Dr Maxwell Ross seconded the motion, which was unanimously carried, and an excerpt of the minute was directed to be sent to Mr M'Andrew.

SECRETARY'S REPORT.

The Secretary (Mr Bertram M'Gowan) in his Annual Report stated:—

During the session just closed there had been five deaths and seven resignations among members, and sixteen new members had been added to the roll, which now contained sixteen honorary members, fourteen life members, and 175 ordinary members. The deaths included the Rev. Mr Thomson, of Hightae, who had done much good work for the Society, and the resignations that of Mr James M'Andrew, New-Galloway, who had contributed so much to their knowledge of the botany of the Solway district. The Society had also sustained a great loss through the resignation of the Secretaryship by Dr Maxwell Ross, owing to his being so much engrossed with other work.

TREASURER'S REPORT.

The Treasurer (Mr J. A. Moodie) read his Annual Report, from 1st October, 1900, to 30th September, 1901, as follows:—

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CHARGE.

Subscriptions from 150 Members at 5s each		£37	10 0
Do. ,, 8 ,, 2s 6d each		1	0 0
	£38	10	0
Entrance Fees from 14 New Members	1	15	0
Arrears of Subscription paid	0	5	0
Copies of Transactions sold	0	15	8
Interest on Bank Account	0	3	4
	£41	9	0
Amount of Subscriptions received, per Mr Robert Murray, towards Excavation of Crannog at Lochrutton, and other similar work	26	10	0
	£67	19	0

DISCHARGE.

Balance due Treasurer at close of last Account				£3	1 11
Less Balance in Savings Bank				0	15 6
				£2	6 5
Paid Salary of Keeper of Rooms and additional Allowance for Heating Rooms during Winter				3	1 0
Paid for Periodicals and Books				2	9 0
Paid for Stationery, Printing, &c.				0	13 6
Paid for Gas and Coals				0	13 10
Paid Fire Insurance Premium				0	4 6
Paid Expenses of calling Meetings—					
Post Cards and Addressing same	£5	9	1½		
Printing same	1	2	0		
				6	11 1½
Postages, &c.				0	18 7
Miscellaneous Payments				1	0 5
				£17	18 4½
Excavation Fund—					
Lodged on Deposit Receipt	£26	0	0		
Paid for Hire to Lochrutton...	0	6	0		
				26	6 0
Balance due by Treasurer—					
Cash on hand	£7	15	9½		
Balance in Savings Banks	15	18	10		
				23	14 7½
				£67	19 0

Account in connection with the publication of "Birrens and its Antiquities."

CHARGE.

By Balance due to Treasurer at 30th September, 1901... ...	£10 14 10

DISCHARGE.

To Balance due to Treasurer at 30th September, 1900...	£10 14 10

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ELECTION OF OFFICE-BEARERS.

Hon. President—Right Hon. Sir HERBERT MAXWELL, Bart., M.P.

Vice-Presidents—Rev. JOHN CAIRNS, M.A.; Mr ROBERT MURRAY, George Street; Mr ROBERT SERVICE, Seedsman, Maxwelltown; and Mr JAMES DAVIDSON, Summerville.

Secretary—Mr BERTRAM M'GOWAN.

Treasurer—Mr J. A. MOODIE.

Librarians and Curators of Museum—Rev. WILLIAM ANDSON and Mr JAMES LENNOX.

Curators of the Herbarium—Professor G. F. SCOTT-ELLIOT, Misses HANNAY, Langlands; Miss CRESSWELL, Nunholm.

Council—Mr JAMES CLARK, Rector of the Academy; Dr JAMES MAXWELL Ross, County Medical Officer; Mr W. J. MAXWELL, Terregles Banks; Mr J. G. H. STARKE, Troqueer Holm; Dr CLARKE, Dumfries; Dr MARTIN, Holywood; and Mr JAMES S. THOMSON, Jeweller.

COMMUNICATIONS.

The Treasurer read the following "*Addenda and Corrigenda*" to Mr M'ANDREW'S *Lists of Mosses, Hepaticæ, and Lichens of the district*:—

Since the publication of my lists of Mosses, Hepaticæ, and Lichens in "The Transactions of the Dumfries and Galloway Natural History and Antiquarian Society"—the Mosses and Hepaticæ on page 89 of No. 6 for 1887-90; the Lichens on page 28, No. 7 for 1890-91; and the cryptogamic botany of the Moffat district on page 30 of No. 8 for 1891-2—I have from time to time in my botanical notes added a few more species of these cryptogams. I have written in the hope that the collection of this scattered information into a Supplementary List may be useful and convenient. I consider that the species given on the authority of Dr W. Nichol and Mr John Sadler from the Moffat district require re-discovery and re-confirmation. As for the other species from the district I think I have specimens of them all. I have not added new localities for species already named. I have also added a few of the rarer species I have gathered in Wigtownshire. It gives me pleasure to note that my corrections in species cited as occurring in the three south-western counties are very few. While this is so, I consider that there is ample room for

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adding considerably to my lists by any one who possesses leisure and interest.

MOSSES—ADDENDA.

N.G. is for New Galloway.

Sphagnum medium, Limp., Moss Raploch, N.G.

22. *Andræa falcata*, Schpr., Grennan Bank, Dalry, N.G.

33. *Gymnostomum microstomum*, Hedw., Isle of Whithorn, W.

42a. *Rhabdoweissia crenulatus*, Jameson, Criffel, Black Craig, N.G., &c.

53. *Dicranella varia, var. callistoma*, Schpr., west side of Loch Ryan, W.

66. *Dicranum longifolium*, Hedw,, Maidenbower Crags, Dumfries (Kew Herb.) Dr. Br. "Moss Flora."

74. *Dicranum spurium*, Hedw., Well Hill, Moffat.

114. *Pottia cavifolia*, Ehrh. Moffat (J. Sadler, Esq.)

129. *Didymodon luridus*, Hornsch., west side of Loch Ryan, W.

134. *Eucladium verticillatum*, L., Portpatrick, W.

137. *Ditrichum flexicaule*, Schwœg., Grey Mare's Tail (Dr W. Nichol).

159. *Barbula fallax, var. brevifolia*, Wils., Kenmure dykes, N.G.

165. ,, *vinealis*, Brid., do.

166. ,, *Hornschuchiana*, Schultz., Dyke at The Holme, N.G.

222b. *Rhacomitrium aciculare, var. denticulatum*. Wils., side of Loch Ken, N.G.

223. *Rhacomitrium protensum*, A. Braun; common on rocks on the hills, N.G.

233. *Zygodon Stirtoni*, Schpr., The Forest, Sorbie, W.

253. *Orthotrichum affine, var. rivale*, Wils., Kenmure Holms, N.G.

302. *Philonotis fontana, var. capillaris*, Lindb., Black Craig, N.G.

304. ,, *calcarea*, B. & S., Portpatrick, W.

320. *Bryum pendulum*, Hornsch., Cluden Mills, Dumfries (James Murray).

329. *Bryum intermedium*, W. & M., Kenmure dykes, N.G.

335. ,, *murale*, Wils., Moffat (G. F. Scott-Elliot).

397. *Fissidens exilis*, Hedw., about Drumlanrig (James Murray).

399. ,, *viridulus*, Wils., Beld Craig, Moffat (J. B. Duncan, Bewdley).

415d. *Hedwigia ciliata, var. striata*, Wils., Grennan Bank, Dalry, &c., N.G.

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416. *Hedwigia imberbe*, Sm., Loch Trool (James Murray).
442. *Heterocladium heteropterum*, *var. fallax*, milde, Glenlee Glen, &c., N.G.
445. *Thuidium recognitum*, Lindb., frequent about N.G., Screel Burn, &c.
Thuidium delicatulum, Mitt., Glenlee Glen, &c., N.G.
455. *Isothecium intricatum*, Hartm., Holme Glen, N.G.
458. *Camptothecium lutescens*, Huds., Southerness.
495. *Rhynchostegium murale*, Hedw., Irongray (James Murray).
514. *Amblystegium aduncum*, Hedw., side of Loch Ken, &c., N.G. (James Murray).
517. *Hypnum intermedium*, Lindb., west side of Cairn Edward, &c., N.G.
528. *Hypnum rugosum*, Ehrh., about Grey Mare's Tail (J. Sadler).
531. „ *hamulosum*, B. & S., do. (Dr W. Nichol).
532. „ *callichroum*, Brid., Black Craig, Blackwater Burn, Dalry, &c., N.G.
543b. *Hypnum eugyrium*, *var. Mackaii*, Schpr., River Ken, Holme Glen, Garroch Glen, &c., N.G.
551. *Hypnum polygamum*, B. & S., Portpatrick, W.

MOSSES—CORRIGENDA.

Erase 16b. *Sphagnum cymbifolium*, *b. congestum*, Schpr., as it is *Sphagnum medium*, Limp.
„ 415c. *Hedwigia ciliata*, *var. veridis*, as it is var. d. *striata*.
„ 539. *Hypnum crista-castrensis*, L. for Kirkcudbrightshire, as it is *Hypnum callichorum*.

HEPATICÆ—ADDENDA.

6. *Lanularia vulgaris*, Mich., Kenmure, Glenlee, &c., N.G.
11. *Riccia glaucescens*, Carr., Burnfoot Hill, N.G., and Portpatrick, W.
20. *Frullania fragilifolia*, Tayl., about Portpatrick, W.
29. *Lejeunea minutissima*, Dum.—*Lej. ulicina*, Tayl., Kenmure Woods, N.G.
32a. *Lejeunea serpyllifolia*, *var. planiuscula*, Lindb., Holme Glen, &c., N.G.
32b. *Lejunea serpyllifolia*, *var. cavifolia*, Ehrh., Moffat and N.G.
34. „ *flava*, Sev., near it if not quite typical, Holme Glen, N.G.

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Lejunea flava, var. pallida, Spr., Holme Glen.
35. „ *Mackaii* (Hook), Dunskey Glen, Portpatrick, W.
37. *Radula aquilegia*, Tayl., Kenmure Backwood, N.G.
40. „ *Lindenbergii*, Gott., Knocknarling Burn, N.G.
47. *Lepidozia Pearsoni*, Spr., Black Craig, N.G.
59. *Cephalozia laxifolia*, Hook., Lowran Burn, &c., N.G.
68. „ *multiflora* (Huds.) Spr., Black Craig, &c., N.G.
77. *Harpanthus Flotowii*, Nees., Glenlee Glen, N.G.
90. *Scapania subalpina*, Dum., Garpel Burn, N.G.
96. „ *resupinata, var. minor*, Dunveoch Glen, N.G.
101. „ *umbrosa*, Schrad., Moffat, Glenhowl, Dalry, N.G.
106b. *Plagiochila asplenioides, var. Dillenii*, Tayl., Dunveoch Glen, &c., N.G.
121. *Aplozia sphærocarpa*, Hook., Garpel Burn, &c., N.G.
128. „ *orcadensis*, Hook., Knocksheen Glen, N.G.
135. *Lophozia porphyroleuca*, Nees., Bowwood, Garroch, &c., N.G.
138. „ *capitata*, Hook., Bennan Hill, Garroch Wood, N.G.
140. „ *alpestris*, Schleich., Moffat, s. of Loch Dungeon, N.G.
151. *Nardia emarginata, var. densifolia*, Black Craig, Shaw Hill, N.G.
159. *Nardia compressa*, Gray, east side of Cairn Edward, N.G.
183. *Aneura latifrons*, Lindb., Bennan Hill, N.G.
188b. *Metzgeria hamata*, Lindb., Ballingear Glen, N.G.
191. *Anthocerus punctatus*, L., near Portpatrick, W.

HEPATICÆ—CORRIGENDA.

Erase 13. *Riccia bifurca*, as it is *Riccia glancescens*.
„ 133. *Lophozia lycopodioides*, Wallr., as it is *Lophozia Lyoni*.

LICHENS—ADDENDA.

Sirosiphon pulvinatus, Bennan Hill, N.G.
Collema pulposum, Portpatrick, W.
Bœmyces rufus, var. squamulosus, Nyl., Knocknarling Burn, N.G.
Cladonia cariosa, Ach., Airie Hill, N.G.
Stereocaulon coralloides, f. congestus, near N.G.
Evernia prunastri, var. sorediifera, N.G.
Peltigera spuria, Moffat.
Parmelia ambigua, Wamphray Glen, Barmurrie, Balmaclellan.
Physcia stellaris, Rerrick Shore.
Pannularia perfurfurea, Nyl., n. sp., Burnfoot Hill, N.G.

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Placodium elegans (Link.), Viewfield, N.G.
Lecanora orosthea (Ach.), near N.G.
,, *subfusca, f. atrynea*, Ach., N.G.
Lecidea umbralis, Nyl. n. sp., Knocknarling Burn, N.G.
,, *neglectella*, Nyl. n. sp., Trochie's Braes, N.G.
Opegrapha atra, Pers.. N.G.
Verrucaria oxyspora, Nyl., N.G.
,, *biformis*, Borr., N.G.
Graphis sophistica, N.G.

II.—*Phenological Observations taken at Jardington during 1900.*

By Mr J. RUTHERFORD.

JANUARY.—Rainfall, 3·72 inches. Comparatively little frost during the month, the hardest being 7 deg. on the 11th. No severe weather. Barometer varied from 29·3 to 30·35 inches. Song of thrush heard on the 22nd. Dumfries rainfall, 3·89 in.

FEBRUARY.—Rainfall, 5·42 in. On the 9th 10 in. of snow fell, on the 10th 2 in. more, when the ground had a covering of fully 12 in.; no drifting. The weather, on the whole, was mild during the month. Dumfries rainfall, 4·07 in.

MARCH.—Rainfall, 0·2 in. There was little frost during the month, the night of the 18th being an exception, when the thermometer marked 16 deg. Cold E. wind near the end. Corn sowing on 27th. Hazel flowered on 10th. Dumfries rainfall, 0·25 in.

APRIL.—Rainfall, 2·3 inches. There was not much frost; the latter half of the month was warm and genial, and grass grew nicely. Swallows came on the 20th; "Coltsfoot" flowered on the 3rd; Anemone on the 12th; Blackthorn on the 25th; Cuckoo first heard, 24th. Dumfries rainfall, 2·77 in.

MAY.—Rainfall, 3·38 inches. No frost at night during the month. Oats and grass made good progress. Turnips sown on the 3rd were eaten by the green linnet and sparrows, and had to be resown on the 18th. Small white butterfly appeared on the 5th; the wasp on the 15th; horse-chestnut bloomed on the 23rd; the hawthorn on the 30th. First heard the corncrake on the 7th. Dumfries rainfall, 3·21 in.

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JUNE.—Rainfall, 3·82 inches. With the exception of turnips, all other crops grew very rapidly, there being warm growing moist weather during the whole of the month. Ryegrass a heavy crop; cut on the 26th. Dog rose bloomed on the 15th. Dumfries rainfall, 4·22 in.

JULY.—Rainfall, 2·55 inches. Warm growing month. Pasture very abundant. Cutting meadow hay, 14th. Blue-bell came into bloom on the 9th; knapweed on the 21st. Meadow-brown butterfly first seen on the 11th. Butterflies are getting scarcer in this locality; orange tip was fairly plentiful here at one time. I have not seen it now for a number of years. Dumfries rainfall, 3·28 in.

AUGUST.—Rainfall, 5·65 inches. Harvesting began on the 9th, being a very heavy crop; a great quantity of it is lying flat, and will make poor fodder and light grain. Wasps scarce. Dumfries rainfall, 6·30 in.

SEPTEMBER.—Rainfall, 3·35 inches. There being so much wet and moist weather in August the disease commenced on the potatoes very early, and by the first of the month the shaws were black. Dumfries rainfall, 3·11 in.

OCTOBER.—Rainfall, 4·72 inches. There was frost on four nights during the month; as a whole, the temperature was warm. Potato digging began on the 3rd; the crop small and poor quality, with a lot of disease. Dumfries rainfall, 4·82 in.

NOVEMBER.—Rainfall, 4·4 inches. Turnip crop in a great many cases very poor. Dumfries rainfall, 4·69 in.

DECEMBER.—Rainfall, 8·2 inches; exceptionally heavy for this month. The rainfall for the year has been 47·71 in., about 8 in. above average of last seven years. Little frost; but a good deal of stormy, wet weather. Dumfries rainfall, 7·07 in.

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RAINFALL AT JARDINGTON FOR SEVEN YEARS IN INCHES.

	1894.	1895.	1896.	1897.	1898.	1899.	1900.
January.....	5·25	2·0	2·32	1·7	2·78	5·8	3·72
February .	8·37	2·9	2·1	2·82	3·41	3·05	5·42
March	2·45	2·62	3·8	5·2	0·90	4·2	0·20
April	1·8	1·8	1·45	2·5	2·9	2·9	2·30
May	3·0	0·62	0·5	1·7	2·32	3·53	3·38
June	2·6	1·1	2·75	2·7	1·6	2·3	3 82
July	2·25	5·6	4·5	1·2	0·5	2·0	2·55
August	3·1	6·1	1·18	5·6	4·12	1·92	5·65
September	2·5	0·45	4·6	3·8	2·4	2·8	3·35
October.....	2·8	3·1	3·1	2·5	3·25	2·72	4·72
November...	5·27	5·2	0·85	3·55	3·85	5·4	4·40
December ...	4·1	3·6	4·5	7·7	5·65	3·3	8·20
	43·49	35·09	31·65	40·97	33·68	39·92	47·71
Dumfries...	42·01	35·03	33·93	42·81	33·71	40·86	47·98

Mean about 39 inches.

Average annual rainfall at Jardington for last 7 years is ... 38·93 in.
Do. do. Dumfries do. ... ... 39·34 in.
Do. do. do. for 14 years ... ... 37·43 in.

22nd November, 1901.

Mr ROBERT MURRAY, V.P., in the chair.

New Members.—Mr John M. Corrie, Post Office, Dumfries; and Mr John J. Mitchell, Teacher, The Academy.

A letter was read from the President of the Glasgow Natural History Society inviting the Society to appoint a representative

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to attend the celebration of their Jubilee. Professor Scott-Elliot was unanimously appointed.

The Treasurer stated that he had still £19 on hand for excavation work.

COMMUNICATION.

First Account of the Excavations of Lochrutton Crannog. By Mr JAMES BARBOUR, F.S.A., Scot., Architect.

The transactions of this Society of 1863 and 1864 give prominence to the class of structures known as Lake Dwellings or Crannogs, and the addresses of the president, Sir William Jardine, contain much of interest regarding them. Several were visited, and in two instances exploratory operations also were instituted. The crannog at Corncockle was cleared by the president, when quantities of smashed bones, evidencing occupation, were found, and at the Black Loch of Sanquhar, the water having been run off, a section was cut through the crannog down to the bottom of the loch, fully disclosing the design. No relics, however, of chronological import, or bearing on the civilisation of the occupation, were discovered in either case. Another like structure, situated at Friars' Carse, examined by Dr Munro, is described in his valuable work, "Ancient Scottish Lake Dwellings or Crannogs." These seem to be the only instances of systematic investigation overtaken in the district in connection with such structures.

Tabulated in Dr Munro's book are the following crannogs in the counties of Dumfries and Kirkcudbright, viz.:—Lochmaben, Black Loch of Sanquhar, Friars' Carse, Loch Orr, Lochwood, Closeburn, Corncockle, Morton, Lochrutton, Loch Kinder, Carlingwark, Lotus Loch, Barean, Borgue, and Loch Fergus.

Last year the Society resolved to institute exploratory operations, selecting Lochrutton crannog for examination. Several circumstances lend themselves to mark it out as one of some importance. The loch is of large area and deep. A peninsula on its east margin is served from the mainland by an artificial ditch and rampart drawn across the neck, and so forms an island about an acre in extent; and about 300 yards distant from the north

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end of the loch there is a large camp or moat from which the farm of Moat derives its name.

The site of the ancient castle of Auchenfranco also lies at the south-west corner of the loch, and at a distance of little over half-a-mile to the south-east stands Hills Tower, tall and picturesque, and, thanks to the care of the proprietrix, well preserved.

The crannog and a small natural island, named on the Ordnance Map Dutton's Cairn, appear as wooded specks on the surface of the loch. The loch lies 305 feet above sea level, measures nearly a mile in length from north to south, and half-a-mile in width, and extends in area to 125 acres. The principal feeder is at the south end, the outfall being opposite, with a rock bed not liable to change. The crannog is 230 yards distant from the peninsula on the east shore the nearest point of the mainland; 190 yards of water separates it from the natural island, which again is 90 yards distant from the west shore of the loch.

It is not a little remarkable that the crannog occupies a position as exactly as may be in the centre of the loch's area, so that notwithstanding its diminutive size, being divided by the *medium filum*, the eastern half belongs to the proprietor of Hills, and the western to Auchenfranco.

In regard to the depth of the loch, the soundings round the crannog show a nearly level bottom with 11 to 13 feet of water. Half way between the islands the depth increases to 35 feet, and 140 yards to the south of the crannog, the deepest part of the loch, the sounding is 52 feet. 12 feet is the depth between the natural island and the west shore, and between the crannog and the east shore it is 11½ feet.

The examination of the crannog by pick and spade, although sanctioned last year, could not be carried out at that time owing to the high level of the loch. The peninsula or outer island was, however, partly examined by sections through the artificial rampart and a number of short trenches in the interior. In the beginning of September last the exploratory works were proceeded with on the crannog, two workmen being employed, and operations continued during three weeks. Considerable progress had been made, when, unfortunately, following on rains, the level of the loch again rose, and ultimately reached a height which rendered postponement of the completion of the investigation imperative.

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The crannog when approached presents the appearance of a low circular cairn of stones resting on a foundation composed of logs of wood, and rising from the water level with a slightly rounded section to a grass-covered plat in the centre. A row of alders, doubtless sown with seeds carried there on the water's surface, encircles the plat, and marks the winter level of the loch. The crannog measures eighty feet in diameter, and the centre plat rises six feet above the log floor.

The work overtaken consisted in carrying a wide section across the crannog in a direction approximately north and south, down through the superincumbent earth and stone to the wood floor of the structure. Another similar section followed, in a direction at right angles with the first, and the excavations were continued in the interior. After considerable advance had been made, the influx of water began to impede operations, and ultimately reached a height making further progress impossible. The ends of the sections were then closed with earth and a pitching of large stones, and the works ceased for the season.

These exploratory excavations have disclosed more fully the characteristics and structural arrangements of the island, and some vestiges, it is thought, of the superstructure or dwelling-house have been brought to light. Relics have also been recovered bearing on the character and era of the occupation.

The sections disclose the strata from the top of the centre plat downwards to the wood floor. There is first turf and free soil about eighteen inches thick, then comes another layer of soil of similar thickness, but more compact and changing to marl or clay at the bottom. Below the second bed a quantity of whinstones, unshaped and disposed without order, the intertices being filled with marl coloured earth, lies on wood floor. The layer is three feet thick in the centre, but towards the margin it tapers down to the wood.

The surface of the island supporting these strata exhibits a comparatively level floor, composed entirely of logs of wood disposed in groups of parallel pieces, lying in many different directions and fitted closely together. The logs, measuring six inches to twelve across, are mostly round, and sometimes retain the bark, but a few are squared in whole or part. Oak, birch, and other woods obtain.

Round the exterior of the island a rough banking of tumbled

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stones slopes outwards into the water, and among the stones are numerous timbers lying without order, and apparently displaced from their original position, as if the outer fringe of the Crannog were broken down.

It has been ascertained that to a depth of five feet from the floor the construction consists of layers of logs alternating with thin beds of stones, and this method probably continues downwards to the bed of the loch, as was proved by Dr Munro to be the case at Lochlee Crannog. It seems, as the timbers would be self-carrying, the most appropriate in the present instance, considering the distance of the Crannog from the mainland and the depth of the water to be crossed. The groups already described as forming the floor are very suggestive of rafts, which might have been put together on the shore and floated thence to the island and into position.

Morticed beams such as are common in structures of the kind have not been observed *in situ*, but detached pieces of this description are found.

The island was probably stockaded, like the Lochlee Crannog, but the morticed beams have disappeared by decay and the action of the waves as the structure began to sink. At a distance of about four feet from the exterior margin remains of a number of oak posts, three inches to six inches in diameter, project above the surface of the floor, and appear to have formed part of the stockading. The posts are pointed and driven into the floor 1½ feet to 2½ feet, and the points have evidently been shaped by means of a sharp axe. In the interior small oak branches similarly pointed are found driven between the logs, as if intended to secure them in position.

The log floor now scarcely rises above the summer level of the loch, and the winter level, as it is indicated by the wash and the lime where vegetation begins, is considerably higher than the floor, shewing that sinking or shrinkage has taken place. The amount of the depression is probably as much as five or six feet, and as the bed of the loch consists of debris of rock not likely to yield much from the weight, the subsidence of the structure has, it may be conjectured, arisen mainly through the compression of the materials of which it is built.

These are the general, and no ways exceptional, features of the structure. On it would doubtless be raised for the shelter of

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the inmates some sort of dwelling-house. The superstructure, however, being particularly exposed to destruction through natural decay and in other ways, has, as might be expected, disappeared, leaving hardly a certain trace of its existence. Whether built mainly of stones or of wood cannot certainly be known. The large collection of stones heaped on the floor of the Crannog is possibly debris of a stone-built house. Of wood debris there was found embedded among the stones several pieces of oak, one morticed, one squared and holed for the reception of a stout pin. Another lay on the log floor apparently *in situ*. It is squared, or nearly so, clean cut across the ends, and rebated as if intended for the reception of uprights, one of the rebates being pierced with a pin-hole, and the upper face shews a long groove 4 inches wide, 4 inches deep, and 26½ inches in length. The piece measures 10½ inches by 8 inches across, 4 feet 2 inches in length, and 3 feet 4 inches between the rebates. Evidently it belongs to the superstructure, and probably served as the threshold of the door. That the wood vestiges are meagre is not surprising, as whatever of this material the building contained was liable to be carried away. Judging from analogous structures elsewhere in Scotland, the probability is that the original house was constructed of wood.

The relics recovered during the excavation of the Crannog shew less variety of objects and a more limited range of occupation than those from some of the other structures of the kind; on the other hand, the character and period of the occupation are, perhaps, better defined than is usually the case.

The loch has been and is resorted to by anglers, curlers, and others, who would doubtless often use the Crannog as a retreat and rest, and so it has happened that the upper stratum of earth yielded articles of recent date. On the top of the centre plat some stones formed a hearth, over which lay peat ash and a quantity of peats, and in the surface mould was found a small leaden bullet, two penny pieces of the reign of Queen Victoria bearing date 1861-66, fragments of glass bottles, pottery, and tobacco pipes. One of the "finds" consisted of the base of the bowl and shank of a curious example of the last-mentioned class of objects, which probably belongs, Dr Anderson suggests, to the 17th century.

The relics and evidences relating to the occupation were

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recovered from among the stones overlying the log floor, and at a depth of not less than three feet six inches below the turf of the centre plat. Food refuse is plentiful, such as bones of animals and birds, which, however, having been burnt, are, except a few, indistinguishable. Of the latter are teeth of the ox, a boar's tusk, bone of a bird, and a fragment of deer's horn. There is also a piece of the jaw of a rodent not much larger than a rat. Shells of hazel nuts are found. Charcoal is abundant, although no hearth has yet been discovered.

Pottery is the predominant article of the relics. Over 170 fragments were found, mostly very small, but showing variety of material, make, and form of vessel. It consists of blue, red, and black metal, almost all wheel made, and, with the exception of a few pieces, it is glazed chiefly with a greenish or yellowish green glaze. Brownish glaze and brownish green glaze are also found. Several pieces are roughened by pounded grit cemented on them by the glaze. Pieces belonging to several vessels are marked with herring-bone ornamentation, others with vertical projecting ribs and oblique parallel lines, and another form of ornamentation consists of a row of thumb marks round the exterior margin of the bottom of the vessel.

There are fragments representing 13 handles of jars and other vessels, also several spouts, one being of tubular form.

Some of the jars in addition to the large carrying handles at the back have been furnished with smaller supplementary handles in front of each side of the spout for the purpose of tilting the vessel to a convenient angle to drink from.

A variety of other objects were obtained, such as a piece of red pigment, probably hæmatite, three small pieces of sheet lead, some nondescript iron, a large nail, part of the blade of a large knife curving inwards, much rusted, a leaden spindle whorl, a small ring or link of bronze or brass, two fragments of a circular vessel of red sandstone, widening upwards, the bottom flat. The side is 1½ inch thick; the vessel is of fine workmanship, smooth inside and dressed with a sharp point outside. From below the log floor was recovered a small splinter of oak neatly wrapped about with a narrow ligament of skin, probably a fragment of a basket.

The most impressive and almost unique relic, however, is a small and imperfect pendant cross of jet or a material resembling

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jet It consists of a circular centre disc, with two arms. The other two arms are broken off and wanting. The disc, which measures ⅝ of an inch in diameter, is flat on the faces and rounded on the edge, and the arms tapering slightly have the corners rounded off, and terminate with flat pedimental canopies. When complete the cross would measure 1½ inch between the points of the transverse arms. On the face of the cross the disc has been inlaid in the form of a floriated Greek cross, and with small globular circles between the arms; and a socket marks one of the arms under the canopy. The reverse is plain except the disc, which bears the letters IHC, with a mark of contraction over them. The letter H has an incurving downstroke, and the C is closed. Dr Anderson, to whom the relics were submitted and who kindly advised respecting their character, says, in reference to the cross: "The cross of jet is a very remarkable thing. It must have been of the equal armed form (Greek). The lettering IHC, with the contraction above it, seems to mean that the three letters are to be read as Jesus, although they may also be expanded in the other sense given to them in the middle ages as Jesus Hominum Salvator. But the use of C for S rather favours the view that Jesus is intended." He further says: "It seems to me to be late. I do not find the incurving down stroke of the H before the 12th century. The closed C used here for S is not an early form either."

Only in one other instance has an article of this description been found in connection with a Scottish lake dwelling. An equal armed cross within a circle and decorated on the face was discovered by Dr Munro at Lochspouts. It is figured and described in his book.

To supply as before a descriptive sketch of the Crannog and the excavations carried out by the Society, with the results, is the chief purpose of this paper, but it may be proper before closing to submit briefly a few suggestions regarding the significance of the details recorded.

The situation of the Crannog in deep water and at the greatest distance from the shore the loch allows is an indication that its primary purpose was to afford security and protection to the occupiers. The existence of the outer intrenched island on the east shore of the loch, which there can hardly be any doubt was associated with the Crannog, is a circumstance not met with

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elsewhere. The two evidently stand one to the other in the relation of the Base-court and the Citadel of a Mote.

At this stage it may be noted that the peninsula or outer island yielded no relics in the interior, but teeth of animals are plentiful along the water's edge, and in the substance of the artificial rampart already described were found fragments of bone, deer's horn, glass slag, and nondescript iron or iron slag. Teeth of animals have also been observed on the natural island near the west shore of the loch.

The Crannog itself is of a type which is common, and there is nothing exceptional in the structural details it exhibits. The work exhibits judgment in the selection of materials adapted to the circumstances, such as admitted of being grouped on the shore and transported over the water, self carrying being preferred; and the disposition and method of securing the pieces in the structure is skilfully worked out. The carpentry shows some advance and the use of the more common tools of the craft.

The use of sharp-edged carpenter's tools of itself establishes the circumstance that the crannog does not date back to the stone or bronze ages, and the character of the relics found on it indicate an occupation comparatively modern. No evidence has been discovered bearing on the comparative age of the Crannog and of the occupation. So far as this partial exploration shows, the relics in this case differ from those of the more prolific lake dwellings examined, inasmuch as no stone (except only one disc) or bronze implements, or implements of bone have been recovered, and ancient pottery is also absent. The pottery, however, which is usually not plentiful, is here the most abundant and characteristic of the finds. Dr Anderson considers that the general aspect of the finds as a whole is mediæval, and the pottery is almost all of the fabric accustomed to be classed as 11th to 16th century.

Occupation appears to have been continuous, and to have extended over a considerable space of time. The occupants consisted of a family, who, judging by the plentiful and varied food refuse and the abundant and, it may be said, elegant table service of pottery, deserve in all circumstances to be described as opulent; and the cross recovered seems to show that they were of the Christian faith. This is the residence and stronghold of

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the mediæval Baron, who had not yet built his embattled and moated stone tower.

To those who expected evidences of the remote the outcome may be disappointing, but the discovery of conditions and modes of living, but dimly shadowed in history, is a result alike interesting and instructive.

Thanks are due to a number of friends, in particular Mrs M'Culloch Jameson and Mr Steel, the proprietors, for permission granted to examine the island; Dr Anderson, who, as before stated, examined and characterised the relics; and Dr Munro, who has taken special interest and afforded active help in connection with the work.

Mr Barbour exhibited all the relics mentioned as having been found in the course of the excavations.

13th December, 1901.

Mr ROBERT MURRAY, V.P., in the chair.

Donations and Exchanges.—Transactions of the Stirling Natural History Society, 1900-1; Journal of the Elisha Mitchell Scientific Society, 1901, part 2.

COMMUNICATIONS.

I.—*A Contrast in Pre-Historic Forts near Dunscore.* By the Rev. RICHARD SIMPSON, B.D., Dunscore.

The fortified places of pre-historic times exhibit the greatest possible diversity in regard to size and structure, form and situation. A marked contrast in these last two respects is presented by two forts lying within a radius of a couple of miles from Dunscore. It is a neighbourhood rich in similar remains, and future examination may bring out other points of difference worthy of notice. This paper is concerned with the contrast in form and situation between the "Camp" on Springfield Hill and the Earthwork at Snade on the banks of the Cairn.

Between five and six miles from Dumfries, on the Glasgow

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Road, and near the ancient churchyard of Dunscore, where Lag lies buried with Robert Riddel of Glenriddel and Friars' Carse as his nearest neighbour, a bye-road strikes over the hill to Dunscore Village. At its highest elevation it passes Springfield Hill farm-house, behind which rises an eminence encircled by well-defined lines of entrenchment. Although popularly attributed to the Romans, this "camp," as it is called, possesses none of the characteristic features of the Roman castra, and no remains have been found to connect it with the occupation of Nithsdale by the legions. The level summit of the hill, which is between six and seven hundred feet above the sea, is defended on every side but one by the natural configuration of the ground. On the north and west there is a steep descent, which becomes almost perpendicular on the south, while on the east the slope is more gradual. Here, where nature is weakest, lines of artificial fortifications have been constructed. A wide trench of considerable depth has been cut, and within it a rampart has been formed, extending in crescent shape for a distance of 175 feet, and encircling the whole eastern side Immediately behind this rampart there is a second trench, backed by a second rampart, and these are carried round the northern and western sides. Sufficient defence was thereby provided on these sides On the south, however, no artificial fortification seems to have been considered necessary owing to the steepness of the slope. The east was the most liable to attack, and here still further efforts were expended. Within the second rampart a platform about 30 feet in width appears, and behind this outpost a third trench was dug, backed by a third rampart. This rampart is so elevated, partly by the nature of the ground, partly by artificial means, as to overlook and command all the works in front. The trenches must have been quite dry, for a supply of water sufficient to convert them into ditches or moats is not within reach. This fort is a good example of a position naturally strong made practically impregnable by the construction of fosse and rampart.

Twelve or fifteen years ago, trench, platform, and rampart were all apparent to the most superficial observer. A wood which formerly crowned the height had been recently cut down, and everything was clearly exposed to view. Even those passing along the road, 300 yards away, could mark the outline of the works against the sky. But the place has been re-planted, and the

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young larches and firs with their thick growth have quite concealed them again. It is difficult, indeed, to make one's way among them, and quite impossible to realise thoroughly how well this lofty platform has been defended by nature and by the hand of man. But it is easy to see that if this hill-top was chosen as a post of observation or as a signalling station, no place better adapted for the purpose exists in all the country round. The whole of Lower Nithsdale lies beneath the eye. The Tinwald and Torthorwald Hills, with the square top of Birrenswark appearing above them; Glencairn and Glenesslin, and the mazes of mountain land beyond them on the border of Galloway; the Lowthers and Queensberry, Criffel, and, if it be clear, Skiddaw on the other side of the Solway, are all within sight.

In striking contrast with the "camp" on Springfield Hill is the Earthwork at Snade, about as far from the village of Dunscore in the opposite direction. Instead of being planted on a hill-top it lies low in the valley of the Cairn. Here no natural points of strength have been seized and skilfully adapted for defence, but everything has been laboriously constructed by the hand of man. Though numerous steep places, which would readily lend themselves to fortification, are to be found in the neighbourhood, a site has been chosen in the level holms beside the river. The entrenchment is not readily seen, for it is hidden in a grove of oaks like that which surrounds Dardarroch on the opposite bank of the Cairn. These trees would seem to be the descendants of the primeval forest which once filled all the valley and extended up through Glenesslin, giving its name to Holywood (Sacrum Nemus—Sacrobosco), and, like Sherwood Forest, sheltering outlaws and robbers. The earthwork lies on the western bank of the Cairn, about 300 yards from the river, and a short distance above the ford which crosses from Cambuscairn to Snade. Two deep trenches surrounding a level platform are the most striking features, and, from the proximity of a stream which passes fifty yards away, it is probable that they were kept constantly filled with water. There are indications, indeed, that the course of this rivulet has been altered for agricultural reasons, and that at one time it flowed close past the outermost trench.

I visited this earthwork several times during the past few months, the most recent occasion being on Saturday last, the 7th of December. I was accompanied then by Mr Aitken, school-

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master, Glenesslin, and with his assistance, valuable on account of his skill with the surveyor's chain, I took several measurements. We found the form of the fort to be elliptical, or perhaps it would be more correct to say it is an irregular circle. The longer diameter—259 feet over all—runs nearly north and south; and the shorter diameter—253 feet—nearly east and west. There is thus only a couple of yards' difference between them, or a single yard in the radius.

The outer trench is both wide and deep. It varies in width from 32 feet on the eastern side to 43 feet on the west—the narrowest part being nearest the river, and the widest where the ground rises slightly above and overlooks the entrenchment. Other measurements gave 38 and 39 feet, on the north and on the south. On these sides the depth does not exceed a couple of feet, but the ground was too soft to make sure. On the west we measured 10 feet 10 inches in depth, not at the deepest part. On the east it appears to be deeper still, but owing to water in the trench there we could not make any attempt at measurement.

The rampart within this outer trench, with its curved upper surface, measures 16 feet across on the north, 15 feet on the west, 14 feet on the south, and 13 feet on the east. It varies considerably in height, being loftiest on the east and west.

Within this rampart there is a second trench, varying in width from 20 feet on the south and east to 24 feet on the north, and 30 feet on the west. The depth of this ditch will be about 5 feet, and less than that in some places. Within it there may have been another rampart, but the traces of it are not very distinct, and such as do exist may only indicate the line of a palisade.

The level area so thoroughly defended is not of great extent. It measures 108 feet from north to south, and barely 100 feet from east to west. Many oak trees are growing upon it and all along the rampart, springing from the roots of trees that have long ago been cut down. The leaf mould of centuries lies deposited on the surface and in the trenches, so that their actual depth and the original level of the ground could be revealed only by excavation. Excavation would also shew whether the foundation of the rampart was formed by stones, loosely piled together or regularly built, or whether it was formed simply with the earth thrown out of the trenches. From the number of stones of con-

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siderable size lying about, especially on the sloping sides of the fosse, the presumption is that they were used as the basis of the wall, even if we make allowance for the fact that the deep outer trench has been used as a "free coup" for stones gathered by farmers from the fields adjoining.

I could discover no trace of an entrance. Apparently the inhabitants came and went on a plank, which could be withdrawn at the slightest sign of an enemy's approach.

Notice must be taken of what appears to be an outpost on the southern side of the earthwork. This is a raised mound, the innermost part of which is almost obliterated. The outermost end is 68 feet from the edge of the trench. It measures 22 feet across at the widest part, and at its highest point is elevated four feet above the cultivated ground. A good view is to be obtained from this slight eminence both up and down the valley, though of course nothing to be compared with the wide prospect from the summit of Springfield Hill.

At the foot of this mound may be seen a white wooden peg, one of the line marking the course of the Cairn Valley Light Railway. The ancient and the modern are thus brought into striking juxtaposition. It is devoutly to be hoped that the railway, operations on which have now been carried to within a mile of the earthwork, will make no encroachment upon this interesting and suggestive relic of the days of old.

II.—*List of the Birds of Glencairn.* By Dr MARTIN, Holywood.

To every lover of nature the study of birds must be of surpassing interest, and that from a manifold point of view. Their purpose in the general economy of nature, their oneness of type and structure, their beauty of form and plumage, with many engrossing peculiarities, such as song and nidification, give to the feathered tribe an attraction for study hardly equalled in the whole realm of things that possess life. It is our privilege to-night to devote a little attention to this great and important class of "aves," and to deal with a given area, to see what of interest can be evolved for any scientific enlightenment that may commend itself to us as a Society. Might it be too much to forecast and hope that some day we may have a paper on birds in their relation to the pre-

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historic period of our country? The county of Dumfries is probably one of the best in the south of Scotland for the wide variety of its wild birds, and the little district of Glencairn (the lower portion at least), for a purely inland parish, can lay claim to a very great many, which the following list will show :—

BUZZARD (*Buteo vulgaris*).

Occasionally a single one is noticed in the higher districts of the parish during the early spring months and late in the autumn.

MERLIN (*Falco æsalon*).

Is rather rare, and only an occasional one is noticed.

KESTREL (*Falco tinnunculus*).

This is the commonest hawk we have, and during the great vole plague several years ago was very plentiful, and I know of several places in our highest hills where they nested in colonies. It is undoubtedly the most useful bird of prey we have, as mice, beetles, etc., form its chief food, although occasionally an unfortunate partridge does pay the penalty, but that fault is outbalanced by the great good done in killing pests.

SPARROW HAWK (*Accipiter nisus*).

It is by no means so plentiful now as formerly. In former years one pair, at least, mated each season in the woods in Dardarroch.

SHORT-EARED OWL (*Asio accipitrinus*).

During the last vole plague it was quite plentiful, when I found several nests with eggs and young. Apparently the mother bird incubates on the first egg laid, as I have found in one nest eggs that were hatching and young from one day old to four or five days old. As a rule, this owl is very scarce.

LONG-EARED OWL (*Asio otus*).

Is very common, and during the vole plague some years ago was very plentiful. As a rule, it builds, or rather nests, in an old rook's or corbie's nest, although sometimes a tuft of rushes is chosen. I have seen as many as seven together in one little plantation.

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BROWN OR TAWNY OWL (*Syrnium aluco*).

Like the above-mentioned, is common, but is very conservative about allowing any more of its species to intrude within its domain, and you seldom find more than one pair within a considerable area of a large wood. The female during the nesting season is sometimes quite pugnacious to any intruders. This spring, while examining the trunk of a very old yew tree, I was butted and clawed on the back of the neck by one which had young in a cleft of the tree, of which at the time I was unaware. She came darting at me again several times, but did not come close enough to strike.

BARN OWL (*Strix flammea*).

Many years ago a pair nested in the neighbourhood, but none have been noticed for many years.

GREAT TIT (*Parus major*).

Is found in considerable numbers in any wooded parts. In early spring it is much in evidence, when its sharp bell-like note is heard ringing through the woods.

COLE TIT (*Parus ater*).

Is plentiful, but not being at all obtrusive, is not so much noticed as some of the other Tits.

BLUE TIT (*Parus coeruleus*).

This is the greatest favourite amongst titmice, on account of its love of nesting and spending the most of the year round gardens and houses. It is very often misnamed "Ox-eye."

LONG-TAILED TIT (*Acredula caudata*).

It is by no means very plentiful, although flocks of twenty or thirty can often be seen feeding in company, streaming through the woods in their restless, tireless energy. The nest is very beautiful, made of green moss and lichens in shape like a wren's, but with the neatness of a chaffinch. Indeed, it is very like a chaffinch nest domed over. It generally builds early in April. It is said to be proof against electric storms, and so protecting the eggs.

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PIED FLYCATCHER (*Muscicapa atricapilla*).

I noticed one early in May, in the year 1897, in the woods of Dardarroch. It is the first specimen I have known to have visited the district.

SPOTTED FLYCATCHER (*Muscicapa grisola*).

This is one of our latest summer visitors in arriving, and seldom arrives before the third week of May. A fair number are usually to be found,

KINGFISHER (COMMON) (*Alcedo ispida*).

An autumn visitor to the river Cairn, and some years is numerous.

CROW OR CORBIE (*Corvus corone*).

This bird is looked upon as both a plague to shepherds and game preservers, and despite the persecution it gets, is plentiful for a bird of prey.

RAVEN (*Corvus corax*).

It does not nest in this parish, but does so in a neighbouring one, but occasionally an odd bird is seen in the higher hills of the district; one authority says it does nest.

HOODED CROW (*Corvus cornix*).

Is seldom seen. I saw one a number of years ago during severe weather in the winter.

ROOK (*Corvus frinzilegus*).

Is still plentiful, in spite of the persecution it has undergone these past few years. This spring they seemed to be more keen in hunting for eggs than I have noticed before, which, I think, must have been owing to the great scarcity of grubs, worms, etc., through the long spell of dry weather. The young rooks do not cast the hair in the upper mandible till the second year, and do not begin to breed till their third spring, I believe.

JACKDAW (*Corvus monedula*).

Is very plentiful, and nests in great numbers amongst the rabbit burrows on some of the hillsides in the upper end of the parish. They make great pets, and their many tricks are very amusing.

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MAGPIE (*Pica rustica*).

Is practically extinct now in this district. Twenty years ago they nested in the woods in Dardarroch every year. Like the above, they also make very nice pets.

COMMON CREEPER (*Certhia familiaris*).

Is by no means numerous, but a fair number can always be seen in the woods all the year round.

CUCKOO (*Cuculus canorus*).

Very plentiful in the hilly districts every spring. A cuckoo's egg was found in a tree pipit's nest in the woods on Dardarroch a few years since. It is strange how few young ones are seen, although the old birds are so plentiful every nesting season.

NIGHT JAR OR GOATSUCKER (*Caprimulgus europoeus*).

A pair of these birds nest every summer in the neighbourhood, and occasionally one has been seen hovering, during the long summer evenings, around the woods on Dardarroch, hawking for moths and flies.

SWIFT (*Cypselus apus*).

Is by no means plentiful, but a few can be seen every summer.

COMMON SWALLOW (*Hirunda rustica*).

I do not suppose there is a farm steading in the county where a pair of these swallows do not nest every summer. A pair were seen as late as the 14th October, this year.

HOUSE MARTIN (*Chelidon urbica*).

It seems to be getting much scarcer, and doubtless the sparrow has a good deal to do with that, as they rob them of their nests.

SAND MARTIN (*Chelidon riparia*).

Nests in many places along the banks of the river Cairn, and also in several sand pits in the neighbourhood.

PIED WAGTAIL (*Motacilla yarrelii*).

Is plentiful during the nesting season and autumn. Nests in

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dykes, cairns, and sand banks. A few are generally to be found through the wintor.

GREY WAGTAIL (*Motacilla sulphurea*).

It is not nearly so plentiful as the last-mentioned bird. Prefers secluded water courses and ponds. A few remain through the winter.

MEADOW LARK OR MOSS CHEEPER (*Anthus pratensis*).

Found almost everywhere, but especially on the hills and moors, where it is best known by name of Moss Cheeper. I saw one of a canary yellow colour in August this year. A few remain all winter, but the bulk of them leave for the coast districts.

TREE PIPIT (*Anthus arboreus*).

This is a quiet bird, and not much noticed, except in spring, when every dell is enlivened by its sweet song. It is generally first heard about the middle of April. The eggs are curious, two nests seldom having eggs alike in colour.

SKY LARK OR LAVEROCK (*Alauda arvensis*).

Is plentiful both summer and winter.

"See the lark is mounting up,
With its song the air to fill."
—*Song of Spring.*

SNOW BUNTING (*Plectrophenax nivalis*).

I have noticed this bird during severe winters with flocks of other birds.

COMMON BUNTING (*Emberiza miliaria*).

Numerous in spring and summer, but only a few can be noticed during the winter. Although so common, the nest is very seldom found, the old birds being so watchful of the approach of intruders.

BLACKHEADED BUNTING (*Emberiza schoeniclus*).

Is found during the nesting season on the banks of the river Cairn, and beside ponds where reeds grow. Does not remain with us during the winter.

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YELLOW HAMMER (*Emberiza citrinella*).

Is very plentiful both summer and winter. During the winter months they gather into flocks with many other birds, and congregate round stackyards. This bird is more correctly called Yellow Ammer.

CHAFFINCH (*Fringilla coelebs*).

Abounds in all our wooded localities during the spring and summer. During the winter months they gather together in flocks, feeding in the fields and around farmyards with other birds.

MOUNTAIN FINCH OR BRAMBLING (*Fringilla montifringilla*).

This is purely a winter visitor, and that only during severe winters. I have seen them in large flocks during such winters. Beech trees is a favourite resort.

HOUSE SPARROW (*Passer domestics*).

Like other districts we have our full supply of this familiar bird, and it is apparently increasing year by year. One black feature in its character is that of occupying the House Martins' nests and driving them away, with the result that few are allowed to build where sparrows are in numbers.

GREENFINCH (*Ligurinus chloris*).

Remains with us the whole year in great numbers. Has two broods of young, and probably three occasionally.

GOLDFINCH (*Carduelis elegans*).

I have noticed a number of pairs this past summer, and have also seen some young ones. If bird snaring was put down they would doubtless be quite numerous in a few years. In the winter months they gather into flocks, and wander all over the country seeking for their favourite food, and thus lay themselves open to the birdcatcher.

SISKIN (*C. spinus*).

I noticed a number during the winter of 1888. They fed a great deal in the alder trees by the river Cairn.

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LINNET (*Linota cannabina*).

Although called the common linnet, it is by no means very common in this locality, except in the winter months, although a few pairs do nest in the district each spring.

RED POLE (*L. rufescens*).

This little bird is much commoner than the above. Nests frequently in the hills around where juniper and strong brush are plentiful, and during the winter feeds a great deal on the birch.

BULLFINCH (*Pyrrhula Europæa*).

This bird does not seem to increase much, although it seems generally to keep up to fair numbers; and as it is a true bird of solitude, dwelling where the spruce is thickest, with only an occasional tour of inspection to neighbouring gardens in the spring just to see that too much plum blossom is not left by the late frosts, is, therefore, not so widely known as many other birds.

COMMON CROSSBILL (*Pyrrhula curvirostra*).

During the years 1887-1888 they were quite plentiful, but did not find any nest, nor did I see any young ones, although they remained in the woods on Dardarroch for a full year without intermission. They seem to have been pretty general those two years, as I saw them in other places in the county as well.

AMERICAN WHITE-WINGED OR TWO-BARRED CROSSBILL (*Pyrrhula bifusciata*).

I shot a pair (male and female) in Dardarroch woods in February, 1890. There were three together at the time, but have seen no more since.

STARLING (*Sturnus vulgaris*).

There is no doubt about the increasing numbers of the starling, and the apparent increasing propensities of the rook to eggs is attributed by many to the starlings eating too much of the available supply of their natural food. During the winter months the most of them leave for better feeding grounds.

DIPPER OR WATER OUSEL (*Cinclus aquaticus*).

Is plentiful in all streams in the neighbourhood. Is probably our earliest nester.

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MISSEL THRUSH (*Turdus viscivorus*).

This bird is by many called the storm cock, although properly the Field Fare. It is the true harbinger by its arrival that winter is coming, and that speedily. A good many nest every spring throughout the whole district.

FIELD FARE (*Turdus pilaris*).

Purely a winter visitor; generally arrives here by the middle of October. I have seen them here still in large flocks as late as the end of May. At that time of the year I have seen them disporting and warbling in chorus apparently as if they fully intended staying to nest.

REDWING (*Turdus iliacus*).

Arrives here at the beginning of October in considerable numbers, leaving again in April or May.

SONG THRUSH (*Turdus musicus*).

Is very numerous, no doubt owing a great deal to the decrease of hawks and other natural enemies.

BLACKBIRD (*Turdus merula*).

Is also very plentiful.

RING OUSEL (*Turdus torquatus*).

Is plentiful in its favourite haunts amongst the hills.

HEDGE SPARROW OR DUNNOCK (*Accentor modularis*).

Is plentiful both summer and winter. Its pleasing song is very familiar.

REDBREAST (*Erithacus rubicula*).

This bird is familiar to all, especially so during the winter, when the inside of a house comes as natural to him as if it was a matter of course.

REDSTART (*Ruticilla phoenicurus*).

Is one of our late arrivals, and is by no means plentiful, but is not easily noticed, as it is very shy.

STONECHAT (*Pratincola rubicola*).

Is seldom seen in this neighbourhood.

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WHINCHAT (*Pratincola rubetra*).

Unlike the above-mentioned, is very plentiful, and a pair may be seen in almost any patch of meadowland or furze during the nesting season.

WHEATEAR (*Saxicola oenanthes*).

Is plentiful throughout the lower part of the parish, although a few do nest in our higher hills.

SEDGE WARBLER (*Acrocephalus phragmitis*).

A few may be either seen or heard along the banks of the Cairn any summer evening. An odd bird may sometimes be seen as late as the first week in September.

REED WARBLER (*Acrocephalus streperus*).

There is no doubt that there is a good deal of confusion with this bird and the last-mentioned, especially as their habits are so similar, but a few are without doubt to be found in this locality.

GARDEN WARBLER (*Sylvia hortensis*).

This is a very shy bird, and very little noticed unless by its rich song. It is by no means rare in this district. Arrives in May, usually about the end.

WHITE THROAT (*Sylvia cinerea*).

Is probably one of our best known and commonest visitants.

WOOD WARBLER OR YELLOW WILLOW WREN (*Phylloscopus sibilatrix*).

Is plentiful during the summer, and is very fond of oak woods, where in the beginning of June it finds such a plentiful variety of caterpillars in the young oak leaves.

WILLOW WARBLER OR WREN (*Phylloscopus trochilus*).

This bird much resembles the former, but is of a much darker olive green shade. Is also more plentiful, inhabiting the same kind of woods. Arrives early in April.

WREN, KITTY WREN (*Troglodytes parvulus*).

Is more distributed, and familiar to all. The richness of its note is seldom fully appreciated.

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GOLDEN-CRESTED WREN (*Regulus cristatus*).

The Golden-Crested Wren has not been anything like as numerous, in this locality at least, since the great storm of wind in 1884, possibly attributable to the immense numbers of spruce trees that were blown down and destroyed.

WOOD PIGEON OR CUSHAT (*Columba palumbus*).

Very numerous, and apparently on the increase. At present they are in great numbers feeding on the acorns. During the month of May great flocks frequent the beech trees, apparently on their northern flight, as certainly none, or at least very few, of them breed here. During October the flocks consist to a great extent of young birds that have not got their adult plumage, and I have no doubt they are migrants from the northern breeding ground.

STOCK DOVE (*Columba aenas*).

Ten years ago this pigeon was unknown in this locality, but now may be seen in flocks of considerable numbers in the autumn. An odd pair may be seen during the nesting season, but have not heard of their nest having been found, although it is very probable a few do nest.

PHEASANT (*Phasianus colchicus*).

Of late years the pheasant has greatly increased, and appears to be taking more to the hilly districts than formerly, staying the whole year round on some of the highest and barest hills where there is no plantation near, roosting on the ground like black game and grouse. It is noticeable that broods brought out on the hills have more birds than those brought out wild in wooded districts.

BLACK GROUSE (*Tetrao tetrix*).

In the past few years black game have been plentiful, and are very liable to increase considerably if protected by those who have shootings leaving the hens free.

RED GROUSE OR MOOR COCK (*Lagopus Scoticus*).

Has been very plentiful during the past few years, this year probably marking a record.

PARTRIDGE (*Perdix cinerea*).

Wherever there is cropping you may find partridges, and in

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a good season like the present in coveys of very large numbers. It has been remarked by many that however many you may leave on a hill they do not seem to increase at all. They are also very wild on the hills, and very hard to follow up and get a shot at. I noticed a brood as early as the 10th of May on one of our highest and remotest hills.

COMMON QUAIL (*Coturnis communis*).

I believe one was noticed a number of years ago.

GOLDEN PLOVER (*Charadrius dominicus*).

A few pairs nest each spring on some of the remoter hills of the district.

PEEWIT OR CRESTED LAPWING (*Vanellus vulgaris*).

Plentiful, and seemingly on the increase, doubtless through the protective laws enacted these past years. If the winter is an open one flocks remain inland. During cold weather they remain by the sea.

HERON (*Ardea cinerea*).

The Heron formerly bred in Cairnhead, but through the trees being cut and the birds shot, have not done so for a great many years. During the early autumn a good number inhabit the river Cairn and where there are good feeding grounds.

CURLEW (*Numenius arquatus*).

Considerable numbers nest each season throughout the district. They usually return from the coast about the middle of February if not severe frost, leaving in the autumn by October.

REDSHANK OR RED LEG (*Totanus calidris*).

Five years since this bird was but a rare visitor. Now a pair may be heard, if not seen, around any marshy land in the nesting season. It has rather a melancholy pipe, which it gives fully on the slightest sign of an intruder.

COMMON SANDPIPER (*Totanus hypoleucus*).

Generally makes its appearance about the middle of April, when it distributes itself pretty well along the whole stretch of the river Cairn. Leaves for the coast not later than the end of August.

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WOODCOCK (*Scolopax rusticula*).

Each season every favourable haunt has its quota of woodcocks, but never in any way numerous. A few remain as late as April, and probably a pair occasionally nest.

COMMON SNIPE (*Gallinago coelestis, Frenzel*).

Some seasons it is very plentiful, and others the reverse. It nests in many places throughout the district.

JACK SNIPE (*G. gallinula*).

A few are usually shot or seen during the autumn and winter. It is seldom that more than two are found together.

LAND RAIL OR CORN CRAKE (*Crex pratensis, Bechstein*).

Arrives here about the middle of April as a rule, and is fairly plentiful. Very few are seen after August. An occasional one is found hiding in a turnip field during September that has not its wing feathers fully fledged.

WATER RAIL (*Rallus aquaticus, Linnæus*).

Is only an occasional winter visitor. Two were shot on Dardarroch a few years ago.

MOOR HEN, WATER HEN (*Gallinula chloropus, Lin.*).

Is plentiful on the river Cairn, and mainly places that have willows and rough cover growing alongside. Severe winters tell very hardly on this bird, and many are frozen to death. One very remarkable feature in the Water Hen is its ability to remain when pursued under water, sitting at the bottom as cosily as if it was on a bush without apparently the least exertion or inconvenience.

COOT (*Fulica atra, Lin.*).

Formerly this bird was seldom seen in the district, but now an odd one or two may be found on some secluded pond, and occasionally on the river Cairn.

GREY LAG GOOSE (*Anser cinereus, Meyer*).

As a rule, if seen at all, it is in flocks flying overhead, although some years since a few lighted on the river Cairn.

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MUTE OR TAME SWAN (*Cygnus olor*).

A few pairs have been kept on private ponds.

WILD DUCK OR MALLARD (*Anas boschas*).

Fairly plentiful wherever suitable feeding grounds are to be found.

TEAL (*Querquedula crecca*).

Is probably the next commonest to the Mallard, although by no means plentiful,

WIDGEON (*Mareca penelope*).

An occasional winter visitor, especially so if the weather is severe.

SCAUP (*Fuligula marila, Lin.*).

Is, like the former, an occasional winter visitant.

TUFTED DUCK *Fuligula cristata*).

This duck has been seen much oftener than the last two mentioned, and one year a pair remained on the Cairn for some time in May,

GOLDEN EYE (*Clangula glaucion, Lin.*).

A few are usually to be found on the Cairn every winter. Although the female and young male are found, it is seldom an old drake is seen.

GOOSANDER SAWBILL (*Mergus Merganser, Lin.*).

During the early months of the year an occasional bird will be seen on the Cairn, and, as a rule, only the hen bird. I have only once seen a male.

DABCHICK OR LITTLE GREBE (*Podicipes Fluviatilis, Tunstall*).

Remains the whole year. I know of one little pond where it nests each year. During the winter it betakes itself to the river Cairn.

THE SHAG OR GREEN CORMORANT (*Phalacrocorax graculus.*)

One was noticed to haunt a pool in the river Cairn during the early spring a few years ago.

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BLACK-HEADED GULL (*Larus ridibundus*).

Remains with us the whole year in considerable numbers. It was noticed that a great many died this spring during the nesting time, without doubt through lack of food, caused by the prolonged drought, which sent worms well out of sight and reach. At Loch Urr, the nearest nesting place, fully sixty per cent. of the young birds must have died through starvation, and those that survived were very weak and thin.

COMMON GULL, BLUE-HEAD, OR SEA MEW, BLUE-MAA (*Larus canus*).

Although not so numerous as the black-headed, is fairly plentiful, and is especially noticeable in the autumn. Nests as a rule near the sea.

LESSER BLACK-BACKED GULL (*L. fuscus*).

This gull may be generally noticed in April, frequenting the hill-sides in search of carrion, and even attacking lambs, especially weakly ones. In Dumfriesshire it principally breeds on the Solway Firth.

HERRING GULL (*L. argentatus, Gmelin*).

An occasional wanderer only.

FEMALE BIRDS TAKING THE MALE PLUMAGE.

A number of years ago I remember three grey hens being shot in one day, each of which had assimilated to a large extent the plumage of the blackcock. This season I watched a hen pheasant that was accustomed and had come for several years to be fed with bread crumbs at a certain house in the parish, which had a most complete imitation of the cock pheasant, a most perfect green neck, and white ring, but no comb nor spurs. The breast feathers lacked the rich black tips and sheen of the male, otherwise the imitation was most exact.

Mr Service said he had listened with exceeding pleasure to Dr Martin's paper. Considering that Glencairn was an inland parish far removed from the sea, and without large sheets of water, and sea birds consequently being rare, the list Dr Martin had given was a very good one. It also contained many notes of interest and value. He noticed with peculiar pleasure

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that Dr Martin referred to his observations on the Night Jar in his own vicinity. By way of criticism, he would like to say that, while Dr Martin mentioned that the Crossbill did not breed in Britain, that was an error, because it had bred in the district within his own recollection, as far back as the time when he was a very small boy, in Dalswinton, where it was found for many years breeding. At present there was a pretty large flock in Hensol woods, where they bred. They also bred at Shambellie, in the large woods there. The Crossbill, however, bred so unusually early in the year that most people in looking for them breeding in February and March like other birds, only found the young fledglings of the Crossbill already out and in full flight. Dr Martin also said that he had seen numbers of the Reed Warbler. He could not quite understand to what particular bird he was referring, because, as a matter of fact, the Reed Warbler was one of the rarest stragglers in Scotland. Even in the southern part of Cumberland it was also rare. Dr Martin mentioned a theory that the elaborately constructed nests were made for the purpose of resisting electrical influences. He (Mr Service) was afraid that that theory was just a little fanciful. Another criticism he would like to make was, that Dr Martin had employed a rather ancient and antiquated classification. Matters of classification and nomenclature were rather beside the question, because, so long as they had the facts, these things were quite subsidiary. At the same time he thought the paper was of real value, and they could not have too many of the kind, the observation of birds being one of the most fascinating pursuits in the wide domain of natural history. The most charming of English classics was founded upon the observation of birds, *i.e.*, "White's Natural History of Selbourne." If they had every parish in the three counties worked out in the same way as Glencairn had been, it would be possible then to have a complete history of the fauna of the Solway.

The Chairman having conveyed the thanks of the meeting to the contributor,

Dr Martin, in replying, said he was glad such an authority as Mr Service thought Glencairn had been properly worked. He was sorry that the classification was not quite up-to-date, but he thought Pennant's classification was very good. However, it could be easily altered for publication. It was generally accepted that Crossbills did not nest in this country, and, not having found

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any, he had concluded that it was so. The Warblers were a fairly numerous family, and it might be that he had been slightly in error regarding them.

17th January, 1902.

Mr JAMES BARBOUR, F.S.A., Scot., Architect, in the chair.

COMMUNICATIONS.

I.—*Meteorological Report for 1901.* By the Rev. WILLIAM ANDSON.

THE WEATHER OF 1901.

The only preliminary remark I have to make before submitting this annual report of meteorological observations at Dumfries for the past year is that the instruments used were inspected by Dr Buchan, the secretary of the Scottish Meteorological Society, on the 27th August last, and, on being compared with his standard instruments, were found to retain their former accuracy, the variations in the case of the thermometer not being more than two-tenths of a degree, and in the case of the barometer of rather less than two-hundredths of an inch, which practically may be regarded as negligible quantities.

BAROMETER.—Beginning with the barometrical pressure, the following are the leading facts:—Barometer—Highest on 23rd May, 30·660 in. ; lowest on 25th December, 28·600 in.; annual range, 2·060 in. Mean pressure for the year (reduced to 32 deg. and sea level), 29·925 in. This is slightly above the average of the last fifteen years, which was 29·904 in. There were six months in which the mean pressure exceeded 30 in., viz., February, May, June, July, August, and November. The lowest monthly mean occurred in December, amounting to no more than 29·515 in., and this was the month in which the most changeable and unsettled weather was recorded. It had the absolute minimum of barometrical pressure for the year, viz., 28·600 in on the 25th, and the readings of the 23rd, 24th, and 26th were almost

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Report of Meteorological Observations taken at Dumfries during the year 1901.

Lat., 55° 4′ N.; Long., 3° 36′ W.; Elevation above sea level, 60 ft.; distance from sea, 9 miles.

1900.	BAROMETER.				N.R. THERMOMETER. In shade, 4 feet above grass.						RAINFALL.			HYGRO-METER.		Dew Point.	Relative Humidity. Sat. = 100.
Months.	Highest in Month.	Lowest in Month.	Monthly Range.	Mean pressure of Month.	Highest in Month.	Lowest in Month.	Monthly Range.	Mean Maximum.	Mean Minimum.	Mean temper. of Month.	Heaviest in 24 hours.	Amount for Month.	Days on which it fell.	Mean Dry.	Mean Wet.		
	In.	In.	In.	In.	Deg.	Deg.	Deg.	Deg.	Deg.	Deg.	In.	In.		Deg.	Deg.	Deg.	
Jan.	30·513	28·976	1·537	29·923	50·	25·5	24·5	43·1	33·7	38·4	0·38	2·47	20	37·4	36·2	34·5	90
Feb.	30·597	29·211	1·386	30·055	49·	21·5	27·5	43·	31·5	37·2	0·43	0·89	12	34·	32·6	30·1	85
Mar.	30·537	28·760	1·777	29·762	57·	18·3	38·7	46·5	33·4	40·	0·58	1·86	14	39·1	36·3	32·7	78
April	30·177	29·010	1·167	29·760	74·5	28·	46·5	56·1	37·8	47·	1·00	3·23	16	45·	42·4	39·4	80
May	30·660	29·145	1·515	30·145	75·	34·8	40·2	65·8	42·	54·	0·80	2·37	10	54·	49·	44·1	69
June	30·467	29·400	1·067	30·001	79·6	40·5	39·1	65·1	46·8	56·	1·08	3·08	13	55·8	51·3	47·	72
July	30·410	29·670	0·740	30·112	91·	44·	47·	75·4	53·8	64·6	0·73	1·88	9	63·6	60·	57·1	79
Aug.	30·496	29·337	1·159	30·006	80·7	42·5	38·2	68·	50·4	59·2	0·77	3·78	16	58·1	54·6	51·4	78
Sept.	30·285	29·345	0·940	29·873	71·	35·5	35·5	63·3	48·2	55·8	0·90	2·82	16	55·9	53·3	50·9	84
Oct.	30·529	29·091	1·438	29·845	69·3	30·8	38·5	55·5	41·	48·3	0·80	4·78	23	47·4	45·5	42·3	87
Nov.	30·613	29·065	1·548	30·109	54·	19·5	34·5	47·	35·6	41·3	0·65	2·80	14	42·3	40·	37·1	83
Dec.	30·317	28·600	1·717	29·515	52·	22·	30·	41·1	32·8	37·	0·91	4·43	24	39·	37·4	35·6	87
Year..	30·660	28·600	2·060	29·925	91·	18·3	72·7	55·8	40·6	48·2	1·08	34·48	187	47·6	44·8	41·7	81

WIND—

	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Var. or Calm.
Days ...	17½	40½	41	38	28½	80½	57	50	9½

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equally low, ranging from 28·630 in. to 28·956 in. On only other two months of the year did the readings fall below 29 in., once on 27th January, and four times in March, on the 1st and 2nd, and again on the 30th and 31st, and in all these days the weather was more than usually stormy, with heavy snow and sleet on the first date, which caused flooding of the river to the depth of about 10 feet, and snow, hail, and sleet on the last, which also resulted in heavy flooding. On the 12th and 13th November, with a fall of the barometer to 29·061 in., there was a severe north-easterly storm which caused much damage both on sea and land, and again about the same date in December there was a similar storm from the north-east, accompanied in England by heavy rains and in Scotland for the most part by snow, which caused great destruction of the telegraph wires and serious interruption of the communication between the south and north; but the greatest fall was about Christmas, and was accompanied towards the end of the year by strong gales and heavy falls of snow, sleet, and rain, and in consequence of the melting of the snow on the higher grounds the greatest flooding of the year was recorded on the morning of the 1st January, when the river rose to the height of 11½ feet, and the Sands were completely covered.

TEMPERATURE IN SHADE (FOUR FEET ABOVE GRASS).—The highest reading of the protected thermometer during the year occurred on the 20th July. There was a thunderstorm on that day, and the thermometer rose to the unprecedented height of 91 deg., which was not only the absolute maximum of the year, but the highest single day reading of the fifteen years to which the observations extend. The lowest reading of the year was 18·3 deg. on the 29th March, an unusual period for such extreme cold, giving an annual range of 72·7. It may be remarked here that March was on the whole a cold and backward spring month, especially in the second half, with frost and snow at the very end, and the same thing was true of the first part of April, verifying in a remarkable degree the old saying, "March borrowed from April three days and they were wild." And this led to the apprehension at that time of a late harvest. The year as a whole, however, was far from being unfavourable in point of temperature. The only months which had means below the average were February, March, June, November, and December, the aggregate

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deficiencies amounting to 7·7 deg. The other months were either up to or above the average, the excess being 13·4 deg. The largest excesses were in May and July, the latter of which had a mean of 64·6 deg., being 5 deg. above the average, and the former more than 2 deg. May was an exceedingly favourable month, and July oppressively warm. It may give a more definite idea of the kind of weather in May and July if I specify the number of days in each month which had maximum temperatures of 70 deg. and above in the shade. In May there were twelve, ranging from 70 deg. to 75 deg. In June there were only three. But again in July there were twenty-five, and of these seven were above 80 deg. and one 91 deg. In August there were thirteen, and one up to 80 deg. Thus the cold of the early spring months, and even of June, were more than compensated by the unusual warmth of May and July, which was extended also into August, and the result was that the harvest, instead of being later than usual, as was at one time feared, was earlier and also excellent in quality. Hence we are prepared to find that the mean annual temperature of 1901 was somewhat above the average. The mean of 15 years is 47·8 deg. It has ranged from 46 deg. to 49·5 deg. This last year it is 48·3 deg. The warmest years of the period were in 1893, when it was 49·4 deg., and in 1898, when it was 49·5, and the only other years on which it was in excess of that of 1901 were 1896 with a record of 48·5 deg., and 1899 with a record of 48·6 deg. Thus there have been only four years out of the fifteen with a higher mean temperature than 1901. The coldest month was December, with a mean of 37 deg., as compared with an average of 39·2 deg. But February and March were also very cold months, and even June was about 3 deg. short of its average. If it had not been for these drawbacks, involving 74 nights on which the protected thermometer fell to and below 32 deg., with an aggregate of 302 deg. of frost, the year would probably have been as warm as either 1893 or 1898.

RAINFALL.—There were 187 days in 1901 on which rain or snow fell (rain 169, snow 18). Mean of 15 years, 199. The heaviest fall in 24 hours was on the 22d June, when the amount registered was 1·08 in. There was only one other day on which the amount was up to 1 in., viz., the 2d April. The rainiest month was October with a record of 4·78 in., and the next was

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December with 4·43 in., which, however, was very little in excess of the average for that month. But the year as a whole was far from being a wet one, the total amount being only 34·48 in., as compared with an average of 37·44 in. The annual rainfalls for the last fifteen years have ranged from 30·99 in. in 1887, which was the driest, to 47·08 in. in 1900, which was the wettest, and ten of them have been heavier than that of 1901. The explanation of this, of course, is that most of the months had a record under the average, and only April, June, August, and October above. February and March were comparatively dry months, the former being the only one which registered less than an inch. The members of the society are aware that in many parts of the country, and especially in England, the rainfall was so deficient last year as to cause serious inconvenience from scarcity of water. This has not been the case in our own district. Nevertheless there were occasional periods which might justly be called periods of drought. The first of these was in February, when from the 1st to the 25th only 0·18 in. of rain fell. Again, in March, from the 8th to the 20th, with only three days of slight rainfall; in May, from the 10th to the 25th, of rainless days. But the most serious drought was from the 25th June to the 14th July, during which period not a drop of rain fell, the effect of which was aggravated by the heat which then prevailed. One thing that may be noted in connection with the past year is the number of days on which snow fell. Not unfrequently snow is conspicuous by its absence, but it has not been so in 1901. I have noted that in January there were three snowy days, in February four, in March one, in April three, and in December seven—18 in all. In December particularly we had something like an old-fashioned winter, with unmelted snow upon the ground for a considerable part of the time, and although I do not possess the means of registering the amount of sunshine the general testimony is that in the summer months it was considerably above the average.

HYGROMETER.—The mean temperature of the dry bulb thermometer for the year was 47·6 deg., of the wet bulb 44·8 deg., giving a difference of 2·8 deg.; while the temperature of the dew point was 41·7 deg., and the relative humidity (saturation being equal to 100) 81. This is a somewhat lower humidity than the

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average of the past fifteen years, which would be about 83, and corresponds with the smaller rainfall of the period.

THUNDERSTORMS.—These have been more frequent than in former years. There was sheet lightning on the 1st January, and again thunder and lightning on the 27th in connection with the severe storm of that day. There were none in February, March, or April, as far as I observed. But there was one on the 3d May, another on the 14th July, and a severe and protracted storm on the 20th of the same month. On 10th August there was thunder and lightning from 7.30 to 1.30 P.M., with very heavy rain. Again, on 2nd October, about midnight, and on the 22nd, there was a recurrence of the same phenomenon, and once more on the 8th December. This makes a record of nine in the course of the year, which is, I think, decidedly in excess of previous years.

WIND.—With regard to the wind direction, these do not differ materially from those reported in former years. As usual the south-westerly blew on the greatest number of days, viz., 80½, the westerly came next with 57, and the north-westerly with 50, the southerly had 28½, making in all 216; while the northerly, north-easterly, easterly, and south-easterly amounted to 137 days, and 9 were calm or variable.

The Rev. Mr Andson read the following paper by Mr JOHN RUTHERFORD, Jardington :—

Phenological and Weather Observations, taken at Jardington for 1901.

JANUARY.

Rainfall, 2·8 inches. Weather mild; lowest night temperature, 20 deg., F.; highest, 44 deg. Nearly the whole of the month the temperature was above freezing at 9 A.M. The lowest barometrical reading was 29·1 on the 27th with a stormy night; the highest on several days was 30·4 Heard the song thrush trying his voice on several fine mornings after the 18th, and when the sun was bright repeatedly heard the cheery warble of the water ousel.

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FEBRUARY.

Rainfall, 0·62. Barometer—lowest, 29·3 inches on the 27th; highest, 30·6 on the 15th. The weather was mild during the month. There was a very hard frost on the night of the 12th, when the thermometer registered 20 deg. of frost. The hazel came into bloom on the 12th.

MARCH.

Rainfall, 2·15 inches. Barometer, lowest, 28·9; highest, 30·5 inches. First half of the month was mild, showery weather. The later half was cold east wind, with four nights of very hard frost from the 26th to 29th. There was 1½ inch of snow on the 30th which went away in a day. Coltsfoot flowered on the 23rd. Sowing oats began on the 25th.

APRIL.

Rainfall, 3·12 inches. Barometer, from 29·15 to 30·2 inches. There was a little frost on three or four nights during the month, while the day temperature was high. By the 7th the fields were looking nice and green, and lawns required cutting. Wood Anemone flowered on the 4th, blackthorn on the 23rd. Saw first Wasp on the 17th, and Swallow on the 21st, and heard Cuckoo on 29th.

MAY.

Rainfall, 1·85 inches. Barometer, from 29·2 to 30·6 inches. There was a trace of frost on two nights, but the month on the whole was warm and growing and May-like. I see on many of the days the temperature at 9 A.M. was between 60 and 70 deg. Small White Butterfly first seen on 1st, Corncrake heard on 18th, Horse Chestnut flowered on 11th; Hawthorn on 21st. Queen Wasps were very plentiful during the first half of the month.

JUNE.

Rainfall, 3·26 inches. Barometer, lowest, 29·5; highest, 30·45. The weather during the month was very warm, with just sufficient rain to keep all kinds of crop growing healthy; few of the turnips round here required to be re-sown, and I saw very little of that new disease on the shaws of the young plants which was prevalent for one or two years before. Ryegrass a fair good

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crop, and ready for cutting about the 26th. Wild Rose flowered on 7th; Meadow Brown Butterfly seen on 29th.

JULY.

Rainfall, 1·5 inches. Barometer, lowest 29·8 to highest 30·35. Very warm during the month. The lowest night temperature was 40 deg.; the 9 A.M. temperature would have a mean of between 70 and 80 deg. There was a good deal of thunder. Grass and other crops made satisfactory progress, and except on gravelly soils there was not a great deal of harm done by the dry warm weather. The Harebell came into bloom on 7th; Black Knapweed on the 15th.

AUGUST.

Rainfall, 4·1 inches. Barometer varied from 29·45 to 30·6 inches. This was a fine warm month, with high night and day temperature. Harvesting commenced on the 1st. Corn crops not so heavy as last year; but having got much more sun the straw and grain are of excellent quality, and most of the crop standing.

SEPTEMBER.

Rainfall, 2·8 inches. Barometer, lowest 29·5 to highest 30·3 inches. I think I may say with confidence that this has been an ideal summer in every sense. Although Qeeen Wasps were very numerous in the beginning of May, scarcely a wasp was to be seen till well on to the end of the summer, when they became very plentiful and were very destructive to the fruit crop.

OCTOBER.

Rainfall, 4·6 inches. Barometer, lowest 29·15 to highest 30·5 inches. There was a trace of frost on three nights, with a fairly high day temperature. Rain fell less or more on every day but the last, which hindered potato digging. The fine dry growing summer and autumn was favourable to the growth of this crop, the shaws remaining green till the beginning of September. The disease did not come on before the tubers were at maturity, and a large crop of fine quality is the result.

NOVEMBER.

Rainfall, 2·82 inches. Barometer, lowest 29·3 to highest 30·6

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inches. On the nights of the 15th and 16th we had about 20 deg. of frost, and some stormy weather followed. Conjunction of Jupiter and Saturn with Venus a little to the South on the 28th, at 6 A.M. The three planets were very conspicuous and interesting for some days. This will not occur again for 20 years.

DECEMBER.

Rainfall, 4·4 inches. Barometer, lowest 28·7 to highest 30·3 inches. Although we have had during this month stormy weather, and a little snow during the last 10 days, we have had no continued severe frost; and even during the last week, when the roads were covered with ice, the hardest was on the night of the 28th, when there was 10 deg. of frost; thermometer at 9 A.M. was 31 deg. Saw a solitary Gray Wagtail on 15th; have not seen one since. Notes and observations in this paper apply to this locality only.

Rainfall in 1901.—January, 2·8 inches; February, 0·62; March, 2·15; April, 3·12; May, 1·85; June, 3·25; July, 1·5; August, 4·1; September, 2·8; October, 4·6; November, 2·82; December, 4·4; total, 34·01 inches—between 4 and 5 inches under the average. Dumfries Rainfall, 34·48; Cargen do., 42·44; Drumpark do., 45·36; Drumlanrig do., 43·91.

III.—*Phenological Observations taken at Moniaive during 1901.*

By Mr JOHN CORRIE.

The short spell of genial weather which prevailed during the earlier portion of March was followed towards the close of the month by a sudden fall in temperature. Snow fell on the 26th and on the 29th March, and low readings of the thermometer continued throughout the greater part of April. Fine weather, dry and warm throughout the day with only slight frost at night, prevailed from the last week of April until almost the close of May. Rain fell on the 26th May, and as dry knolls had commenced to brown the change was a welcome one. The early portion of June was extremely variable. High temperatures ruled on the 7th and 8th, but from the 9th to the 13th a succession of cold gales, accompanied by rain, was experienced. The gale on the evening of the 10th was very destructive to tender vegetation. Pear, Apple, and Plum tree foliage suffered severely; also

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the foliage on ornamental forest trees, such as the Horse Chestnut. Hail fell on the afternoon of the 12th June, and the temperature shortly afterwards became normal. The later portion of the month and the first three weeks of July were remarkable for warmth. On some days the thermometer registered 78 in the shade. Thunderstorms of a somewhat violent character visited the district on the 14th July, the 20th July, and the 10th August. By the 20th of July hay harvest was practically over. The crop, although deficient in bulk, was of first-rate quality, and must have been secured at a minimum of cost and trouble. Corn harvest commenced in the second week of August (an unusually early date), and by the end of the month the work was generally over. These few notes descriptive of weather conditions seem a fitting introduction to my phenological observations. The Coltsfoot, thanks to a genial March, was found in flower on the 10th of the month. The Hawthorn was first observed in blossom on the 31st May. The following are the flowering dates for the other plants scheduled by the society:—White Ox Eye, 1st June; Dog Rose, 13th June; Harebell, 6th July; Greater Bindweed, 11th July; Black Knapweed, 19th July; Ivy, 13th October. The Sand Martin was first seen on the 4th April. The House Martin was not observed until the 10th May. The Swallow arrived on the 18th April, and the Cuckoo on the 26th April. The Swift, once common, seems to have deserted the district. The Willow Wren and the Spotted Flycatcher were found nesting on the 2nd June, both with their full complement of eggs. The small White Butterfly was first seen on the 2nd May. The Marsh Ringlet was seen on the 30th June, and may have been present earlier. The Meadow Brown is recorded for 3rd July, A female Saw Fly was captured on the 19th July. Wasps were late in putting in an appearance, but became plentiful as the season advanced. A Nightjar was seen in the heart of the village at 8.35 p.m. on the 15th August. A few Swallows remained until the 16th Sept. The House Martin was last seen on the 6th October. It will be understood that the date of my appointment as an observer was too late for me to record the flowering of the Hazel and the singing of the Thrush.

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21st February, 1902.

The Rev. WILLIAM ANDSON in the chair.

Donations and Exchanges.—Proceedings of the Academy of Natural Science of Philadelphia, 1901; Birds of Western New York, by E. H. Easton; Annals of the New York Academy of Science.

COMMUNICATIONS.

I.—*The Fauna of Glencairn.* By Dr MARTIN, Holywood.

Perhaps, after the birds, the most important group to take up is the fauna of a district. By fauna is meant the animals peculiar to a given district or county as distinguished from those that are imported, and, of course, have no relation to tame animals. The district of Glencairn affords examples of the common wild animals of the south of Scotland, and I do not know that there are any but will be more or less familiar to everyone. We have seen that birds play a great part in the economy of things, and I hope we shall leave this paper with the impression that our hairy and fur-coated friends are not wholly without their use, and not to be classed as vermin altogether—that is, as voracious ones that should be wantonly destroyed. Let us try to enter into the spirit of all things in taking up these little individuals, and, besides noting their use, give them a place in the poetry and spirit of every-day existence.

The fauna of the United Kingdom beyond a few very rare and remotely distributed species is fairly well distributed throughout the length and breadth of the land, and to mention those found in a single county or even parish includes fairly well the full list, as those that have been noticed in the district of Glencairn will show.

COMMON SQUIRREL (*Sciurus vulgaris*).

The squirrel is known to everyone probably as much from its amusing habits as from the pleasure and sport most boys brought up in the country have in chasing and pelting him with stones as he escapes from tree to tree, leaping from branch to branch, sometimes with such haste and daring across some yawning gulf

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between two stalwart monarchs of the woods, that it appeared as if stayed for a moment in mid-air to be dashed to the ground, only to be saved by clutching some waving twig that seemingly had stretched out its kindly tendrils in aid of its frolicsome friend. Since the severe wind storm of some ten years ago which blew down so many spruce trees, squirrels do not appear to have been quite so plentiful, whether from lack of food or warm shelter it is difficult to tell. They have young early in spring, usually in the beginning of April, having from three to five in a brood. I remember two young ones, still blind, taken from their nest and given to a cat to suckle. The cat was as proud and careful of its foster children as of its own kittens, and was friendly and kindly to the squirrels after they were full-grown. Strange to say this same cat was an immense poacher, even killing and bringing home squirrels from the woods, although its own foster children were still about it.

WATER VOLE (*Arvicola amphibius*).

On account of its very shy habits the Water Vole is probably less known than its numbers warrant. All such beasties go under the name of rat, whether vole or grey rat of farmyard celebrity. Wherever there is a stretch of water, be it stream or pond, there you will find among other rats the water vole, especially so if the soil is soft and congenial to the growth of water plants that have succulent roots and stems. The usual colour is a rich brown, but black ones are far from uncommon. They are expert divers and swimmers under water, and it takes a good dog to again find one once it has slipped off from the water edge into a good-sized pool.

FIELD VOLE (*Arvicola agrestis*).

This species, about the size of an ordinary mouse of a greyish brown colour and short tail, is probably best known on account of its periodic ravages of our pastures. It is exceedingly prolific, breeding many times during the year, having from four to six in one litter. Its usual food is grass roots, but it is a torment to gardeners on account of its love of crocus roots. During the past century its ravages have been noted in the years 1813-14, 1874-76, and in 1892, when Dumfriesshire fell a special victim. It is estimated to have extended at that time in this county as a scourge over from eighty thousand to ninety thousand acres of

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pasture land. It does not seek safety in holes as readily as is usually the case with such species, and is therefore very easily killed with a good dog.

BANK VOLE (*A. glariolus*).

This species may almost be said, from external appearance, to be a go-between 'twixt the field vole and the field mouse, which it greatly resembles in colour. Its tail is a third longer than that of the field-vole, and it has more prominent ears and eyes. It is found round gardens and woodlands, but is never very plentiful. The Bank Vole devastated plantations in 1863, eating the bark of the trees.

BROWN RAT (*Mus decumanus*).

This is doubtless one of the most widely distributed and best known of rodents, and needs no description. It is omnivorous, and takes as kindly to a crust of bread or an ear of grain as to a good fat duckling. When it survives its many enemies and reaches full maturity it attains a large size and makes a fierce fight with a dog. It is said to have first reached England from the East early in the 18th century.

HOUSE MOUSE (*Mus musculus*).

Is like the above, common, and known to all. When kept in confinement you may have white, black, and brown ones, the same as we have in tame rabbits.

LONG-TAILED FIELD MOUSE (*Mus sylvaticus*).

This species is much larger and of a rounder shape than the Field Vole, and its tail is fully as long as its body. It is of a bright reddish brown colour, with white breast and belly, with a little touch of greyish brown shading down the throat. Its ears are prominent, and it has large luminous black eyes. It is not much seen, but is not scarce. Occasionally it invades outhouses, especially if roots are there stored.

COMMON SHREW (*Sorex vulgaris*).

The Shrew may be found in any pasture field or wood that has a clothing of grass beneath. It is probably as plentiful in Glencairn as it usually is in other places. It feeds on insects,

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worms, and beetles. It is often found lying dead without any trace to account for its death.

WATER SHREW (*Sorex fodieus*).

Is peculiarly adapted for water existence by reason of stiff cilia to the sides of toes and under surface of tail. It feeds on insects and fresh water crustaceans, and may be observed working amongst stones in shallow streams. It is a pretty object to see with its little broad body so hunting in deeper water. It cannot be said to be common in this district.

LESSER SHREW (*Sorex pygmæus*).

It may be recognised by its diminutive size and a few minor points of difference of structure, as compared with the common shrew.

COMMON MOLE (*Talpa europaea*).

This is another of our fauna that is known to all, more by the little mounds of earth it puts up than by the animal itself, unless that be a dead one, as it is not everyone who has seen a live Mole. When above ground it is about as much from home as a fish is out of water. Worms, slugs, beetles, and the larvæ of the last-mentioned comprise its diet, although it has been noticed to seize small birds feeding in its mounds.

HEDGEHOG (*Erinaceus europaeus*).

Though a good deal persecuted this animal keeps up its numbers, and on a summer evening it may be seen hunting much more rapidly than most would suppose for slugs, insects, etc. They also eat eggs and kill snakes—according to popular belief by seizing the snake by the tail and rolling into a ball, allowing the snake to beat itself to death on its prickly spines. The young are a pinky white, and the soft spines gradually darken as they grow older and stiffer.

The true explanation is the greater resistance of the blood of the Hedgehog against snake poison and other poisons.

COMMON BAT (*Vesperugo pipistrella*).

This, the smallest and best-known British Bat, is fairly common. As a rule, it hawks about shady glades and edges of woods towards dusk, though occasionally one may be seen either in the

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early evening long before dusk or late in the morning flying about in quest of gnats, etc. Occasionally one may be noticed as early as March if the weather is mild, also as late as the end of October. Its colour is rich dark brown over the back, with a mousy grey over the belly. The ears are very small and mouse-like. I have secured a specimen already this year, which was shot flying about with another in this locality.

DAUBENTON'S BAT (*Vespertilio daubentonii*).

Not observed by writer but by others.

LONG-EARED BAT (*Plecotus auretus*).

Not so common as the short-eared. It prefers the tiled roofs of houses, which are non-existent in this district.

COMMON FOX (*Canis vulpes*)

A few are killed each year in our upper districts. This not being a hunting locality, it is no crime to shoot reynard at sight, and is, therefore, not numerous enough to do a great deal of mischief.

COMMON WEASEL (*Mustela vulgaris*).

Although the weasel is universally looked upon as a dread to the safe upbringing of game, it has a worse name than it rightly deserves, and in reality does a great deal of good in hunting down rats, mice, and various insects, although a young rabbit, pheasant, or partridge do not come amiss if in their path. In early autumn as many as seven or eight may be seen apparently hunting together, probably the members of a family.

STOAT (*Mustela erminea*).

Here we have a true destroyer of game, and woe betide the covey of young pheasants, grouse, or partridges that comes in his way. He is verily a true blood-sucker, and is a continuous scourge to game preserves. It is a very common occurrence to see a stoat running down a rabbit, though the rabbit is so paralysed by fear that it is unable to run either far or long. In winter it takes on a fine white coat, and is a beautifully soft fur. Although considerably trapped, there are still numbers well distributed throughout the district.

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OTTER (*Lutra vulgaris*).

This is another of our wild animals that is better known in name than in person. He is a true night roamer, and it is only the night fisher—a poacher maybe—that has a chance of seeing him as he is. To many he is probably better known by the marks of his ravages, by some choice trout lying half eaten by the edge of a favourite pool. Trout, salmon, and eels no doubt are his favourite food, but I have also watched one hunting for crustaceans underneath the small stones by the river's edge. Although a very shy animal by day, he is not so easily disturbed at night when feeding, and may be approached very close if no noise is made. A hole by the river's edge is his favourite hiding place, although one is occasionally bolted from a rabbit burrow a long distance from water. Three young ones at a time must be a usual number, as I have many times seen that number together during an August flood when flooded out of their retreats.

ROE DEER (*Capreolus Caprea*).

Formerly they were fairly numerous, but they are now very scarce, owing to their destruction on account of their alleged habit of feeding on the shoots of young trees.

RED HARE (*Lepus europæus*).

This fine animal is getting, alas! too scarce in many parts of the county, and it is only where the proprietor and tenant go hand in hand in protecting it from wanton destruction that its numbers are at all considerable. There is no finer game in this county, be it fur or feather, than the hare, and it seems a cruel shame to see the way some farmers persecute them for the sake of the few shillings they fetch in the market. It is not an animal that gives much sport to shoot, but is always a welcome addition to the bag from the table point of view. A number of years ago coursing by greyhounds was a popular sport, but has been out of vogue in this district for many years now.

BLUE HARE OR MOUNTAIN HARE (*Lepus timidus*).

On the higher hills of the district an occasional mountain hare is seen or shot, but this breed never has increased much beyond a few. It is not so large as the red hare, but is almost as good eating. During the winter it becomes white, with a few dark

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hairs standing out in the fur as if to lend a greater purity to its winter coat. The tip of the ears remains dark.

RABBIT (*Lepus cuniculus*).

It seems hard to believe that about fifty years ago rabbits were almost, if not, non-existent in this district, where now you can scarcely traverse a field, hillside, or wooded patch without putting up one. When allowed to run riot it does a great deal of damage and harm, but when kept in proper subjection it is doubtless a source of some profit and pleasure to the farmer. Like the brown rat, it is wonderously prolific, and the amount of progeny one pair can produce in a single breeding season is enormous. In this district it is numerous from the lowest valley to the highest hill. It is common to find one with malformed front teeth, one growing straight out from the jaw for as much as two inches, the other teeth curving inwards, where in time they would cause the death of the unfortunate animal. These malformations are no doubt caused through an accident to the teeth or jaw, usually a shot wound either in the teeth or in the jawbone. Black ones and white ones are common, although in their true wild state grey is the natural colour.

BLACK RAT (*Mus rattus*).

Extinct in the memory of the senior generation; was smaller than the Brown Rat.

FOUMART (*Mustela putorius*).

Attacked poultry yards and game; confined now to inaccessible retreats.

II.—*Edward I. at Sweetheart Abbey.* By E. J. CHINNOCK, LL.D.

The historical field of Dumfriesshire and Galloway has been so well reaped and gleaned by our Society that it is very rarely that anything fresh can be brought forward. But I think that I have picked up one little stray stalk passed over by the gleaners, which I now proceed to hand into the garner of our "Proceedings." After crushing Wallace, Edward I. spent a considerable time in reducing various parts of Scotland to subjection. He met with vigorous resistance at Carlaverock, but after a long siege, took the castle about July 10, 1300. My old friend, the

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late Mr M'Dowall, in his History of Dumfries, gives a full description of the siege. Just as Edward was completing the subjugation of the country, the Pope Boniface VIII. laid claim to Scotland as a fief of Rome, and bade the King to cease molesting the Scots. Neither Pope nor King had the slightest claim to the country, but the latter determined to resist the Pope's extraordinary assumption, which was made in a bull dated at Anagni, 27 June, 1299. The Pope sent the bull to Robert Winchelsea, Archbishop of Canterbury, with a letter in which he told him to deliver it to Edward with his own hand. The Archbishop, accompanied by a papal envoy, Lumbardus, did so at Carlaverock, 24 August, 1300, according to the histories. So says Burton and so says M'Dowall. This scene was an important event in the history of Scotland and a still more important one in that of England. But in reading Bishop Stubbs's Constitutional History I find that the date of the interview is given 27 August, 1300, and the scene Sweetheart Abbey. I find that Edward was not at Carlaverock in August, 1300. After taking the castle he marched through Galloway and advanced as far as Irvine. He did not leave Galloway till the end of October. Mr Hunt in his Life of Edward I., and Professor Tout in his Life of Winchelsea in the Dictionary of National Biography, agree with Bishop Stubbs in the place and the date. There is no doubt of the correctness of these facts, as they are derived from a letter from Winchelsea himself to the Pope, dated Otford, 8 October, 1300, in which he relates in detail his long journey to Carlisle, the difficulty he had in reaching the King, his perils from the sea and the Scots, and lastly his interview with Edward at Sweetheart Abbey on 27 August, 1300. See Chronicles of Edward I. and Edward II. (*Annales Londinenses*, pages 104-108, Rolls Series). Sweetheart Abbey was quite new when this celebrated event occurred, having been founded only twenty-five years before by Devorgilla. The chronicler, Walsingham, tells us that Winchelsea added an exhortation of his own to the Pope's command; and spoke of the safety of the citizens of Jerusalem and how those who trusted in God were as Mount Zion (Psalm 125, 1). "By God's blood," shouted the King, "I will not hold my peace for Zion, nor keep silence for Jerusalem (Isaiah 62, 1), while breath is in my nostrils, but I will defend my right that is known to all the world with all my might." In acknowledging the

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receipt of the bull, he told the Pope that "it is the custom of the realm of England that in matters touching the state of the same realm there should be asked the counsel of all whom the thing concerns." This is a repetition of the statement already made by Edward when he summoned the model Parliament of 1295, which established the representation of the Commons. "That which touches all shall be approved by all; it is very evident that common dangers must be met by measures concerted in common."

The interview at Sweetheart Abbey between Edward, Winchelsea, and Lumbardus is interesting to the student of English history, because it brought about the first statement from King and Parliament declaratory of the fact that England was free from the Pope's dictation. This was the first step in the movement which ended in the Reformation under Henry VIII. The King summoned a Parliament which met at Lincoln in January, 1301. A letter was drawn up by the Barons and sent to the Pope, affirming that the Kings of England never have answered or ought to have answered touching any of their temporal rights before any judge, ecclesiastical or secular, by the free pre-eminence of the state of their royal dignity and by custom irrefragably preserved at all times.

I have consulted the Chronicle of Matthew of Westminster, and find that he also states that the Archbishop of Canterbury in writing to the Pope said that he met the King at the New Abbey of Duzquer in Galloway. On consulting Dr Wilson, of New Abbey, I find that Duzquer is a corrupted form of Doux Cœur, the Norman translation of Dulce Cor (Sweet Heart). The Norman form Douzquer was a frequent name for the Abbey in Plantagenet times.

14th March, 1902.

Mr JAMES BARBOUR, F.S.A. Scot., Architect, in the chair.

Donations and Exchanges.—Annals of the New York Academy of Science, Vol. XIV., pt. 1; Annual Report of the Bureau of American Ethnology.

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Exhibits.—The Treasurer exhibited, on behalf of Mr James M'Cargo, Kirkpatrick-Durham, a rubbing of a sculptured stone found at Kirkpatrick-Durham.

COMMUNICATION.

"*The Irvings of Hoddom.*" By Mr GEORGE IRVING, Corbridge-on-Tyne.

There is no accurate account of when the ancestors of the Irvings, called "The Dukes of Hoddom," first settled there, but it was probably about the end of the twelfth or beginning of the thirteenth century. Whether they came from Ayrshire or Normandy is not quite certain. The more generally recognised view is that they migrated from Cunningham in Ayrshire. When the Irvings were first induced to leave Ayrshire and settle on the Scots border to form a border guard, they planted themselves at Auchenrivock, on the banks of the Irving Burn, near Langholm, where they had a tower, a fragment of which still stands, forming part of the garden wall. They quickly spread from the Esk to Annandale and Nithsdale, where they could watch the fords from the Esk to the Nith. That part of the clan which settled in Hoddom is supposed to have had its first stronghold where the farm of Hallguards now stands. This was near the centre of the ancient village of Hoddom. The site of the Townhead is still known by some cottages of that name. It is believed that the village extended from the Townhead along the river side to below the old churchyard. Another cluster of small farms stood where a solitary cottage now stands, about three-quarters of a mile from Hoddom Bridge on the road to Ecclefechan.

It is evident that the Irvings were firmly established in Lower Annandale when Robert de Brus fled from Edward Longshanks, for he took shelter among them for some months. Bruce, as Lord of Annandale, subsequently built castles at Annan, Hoddom, Castlemilk, and Lochmaben, These strongholds show how much importance Bruce attached to Annandale as the direct route from England to Scotland.

It is not known when the chief in Hoddom was first honoured as Duke of Hoddom. The first mention of the title I have come across was in 1490 of the "good Duke Ritchie of old,"

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Hoddom from Blaeu's Map 1650.

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which indicates that the title had been in familiar use for a considerable time, and it was certainly used down to the middle of the 17th century, or over 200 years. The clan appears to have had all the land in the ancient parishes of Hoddom, Luce, Ecclefechan, and Trailtrow, with a part of St. Mungo. In the various changes that took place in the following centuries the Dukes of Hoddom seem to have lost a large portion of their patrimony, but kept hold of Knockhill and Whitehill, which latter place they have held through all the stress and strife of five or six centuries. Tradition says that the name of Knockhill was given to the place by the first Irving who settled there in remembrance of the old home in Cunningham. Be this as it may, there have been Irvings in Hoddom for centuries, and they were known as Dukes of Hoddom from the early part of the 15th century to the middle of the 17th.

From the Solway to Milk Water they were often called upon to defend their lands and heritage, and took an active part in all the wars. There were Irvings at Knockhill, Irvings at Trailtrow, Irvings at Kirkconnel, Luce, Turnschaw, Cleughheads, Warmanbie, Blacketlees, Hurkildail, Annan, and Stapleton, without taking into account the range of towers that extended on both sides of the Kirtle from the Lochmaben Staines at the mouth of Kirtle Water to Birrenswark.

The Irvings at Trailtrow kept up the bonfires on Trailtrow before the Tower of Repentance was built, and had a farm adjoining, called Ward Park, for doing so. In 1541 Habby of Trailtrow had two sons, John and Dick. That was before the Tower was built.

The Laird of Knockhill was recognised as the head of the clans in Hoddom, and was known as the Duc. This meant leader, or "chieftain," as we find in a marginal note of the revised version of the Bible as the explanation of the title "Ducs of Edom."

In a charter by Robert de Brus of fishings at Blaaswatwood (in Gretna) Robert de Hodelm was a witness, circa 1190, but it does not say whether he was a Knight or a Priest. On Bleau's map, 1660, "The Duke of Hoddom" is indicated as including a considerable stretch of land from the river up to Barr Hill and Knockhill. He is also called "Duke of Hoddom" on Moll's map, 1725. In "Acta Dominorum Concilii, 6th November, 1490,"

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we have reference to "John Irvin callit the Duc," and to Thomas Rae.

"Afternoon Sederunt, the Bishops of Glasgow and Aberdeen, Chancellor Earl of Buchan, Lords Gray, Olephant, Drummond, Secretary Mr Richard Lawsoun."

"The Lordis of Consale decrettis and delinerie that Johne Lindesay of Wauchop and William Graham of Moskeswray (Shaw) sall content and pay to Robert Costrale, Walkare in Linlithgow, a tauny wob conteuand XX elnis of walkit claith, price XXLI., quhilk was delinerit to the said Robert be Elspeth, the spouse of umquhile John Butlare, for the quhilkis the saidis Johne Lindesay and William Graham becom souerte for Johne Irwin, callit the Duc, and Thomas Rae, quhilkis Johne and Thomas tuk thaim to our souerane Lordis remissionu therefor in the Justice Are of Drumfrese, and the saidis Johne Lindesay and William Betoun souerte for satisfactioun of party; as was preffit be the copy of the Adinruale subscripsit with the hand of Maister Richard Lawsoun, Justice clerk, schewin and producit before the Lordis. And ordinis our souerane Lordis letteris be direct to distreuse the said personis thair landis and gudis herfore, and that were summond to this accioun oft-tymes callit and nocht comperit."*

It will be observed that the John Irwin, callit the Duc, and Thomas Rae were jointly concerned. The great centre of the Raes was at Trailtrow, where many of their descendants still live. Indeed the old churchyard at Repentance has a great many tombstones bearing the name. Their shields bear three roe deer, whilst those of the Irvings bear three holly leaves. We do not know what was the result of the above "decretti." It indicates that the then Duc was a prominent man, and evidently had been established at Hoddom for a long time.

Bruce built castles at Hoddom, Castlemilk, and Lochmaben, and the Duc's Tower was halfway between Hoddom and Castlemilk.

John Irving of Staikheugh was wrongly imprisoned in Carlisle Castle for half a year, and Maxwell, the warden, complained of this to the King in May, 1592.

*Sir M. Lindesay owned Wauchopdale 1333. He was at one time Governor of Perth.

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In 1545 we find "Duke Richard" of Hoddom mentioned as having 142 followers. (Callendar of State Papers, 1547-1565.)

In 1552 among the Scotchmen sworn to serve the Kynges Majisty were the following:—

"Rychie Irwin called 'Dukes Rychie' and those
"under him 127 (Hoddom)."
"Ceristie Irwin called Matthews Crestie 74
"(these would be of Pennersax)."
"Wat Yerwin 22. Turnschaw."

When William, Lord Herries, died in 1547, Hoddom, of which Knockhill then formed part, was left to his three daughters, Lady Agnes, who married John, Master of Maxwell, Lady Katherine, who married Stewart, son and heir to Alexander Stewart of Garlies, and the youngest daughter, Lady Janet, who married James Cockburn of Skirling, Knight. Lady Janet had a tocher of 2300 merks.

In 1581 Barbara Stewart, daughter of Alexander Stewart and Dame Katherine Herries, one of the three co-heiresses of Hoddom, married John Kirkpatrick, heir apparent to Thomas Kirkpatrick of Allisland, so that the Sharpes of Hoddom were lineal descendants of Katherine Herries of Hoddom. Lady Agnes in February, 1549, got a crown charter of the third part of the £20 land of Hoddom, her sisters getting the other two-thirds. On the 20th May following (1549) Lady Agnes made over this charter to Richard Irving, which ran as follows:—

"To all and Sundry &c. Agnes Herries, eldest daughter and one of the three heirs of that noble and potent Lord William Herries and spouse to John Master of Maxwell (Afterwards Lord Warden) with the express consent and assent of my beloved husband, for the good and faithful services done to him and me by our well beloved Richard Irving (called of old Duke Richie) and to be done in time to come, and we being willing and most earnestly desiring thankfully to reward the said Richard &c. Not only to have given and disponed and by this our present charter confirmed but also by these present gives grants and by this present charter confirms to the said Richard his heirs and assigns All and haill That third part of all and haill my twenty pound land of old extent of Hoddom extending to one ten merk land of old extent with its pertinents lying within the Parish of Hoddom and Stewartry of Annandale &c. to the said Richard

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Irving (otherwise called Duke Richie) his heirs and assigns of me and my heirs and assignees in feu and heritage for ever. In its haill meaths and marches both old and divided as they lie in length and breadth in valleys plains muirs mosses ways paths waters stanks rivers meadows pastures and pasturages mills millheads with their sequels hawking hunting fishing turfs peats coals cunnings cunningards dewes dewcots smith-smidies broms whins woods frogs bushes timber-trees quarries freestone and whinstone with courts with their appertenants, bloodwitts and the Marchel Mulievum &c. &c. beneath the earth and above the earth far and near belonging or any ways known to appurtain and belong to the said third part of the foresaid twenty pound land &c. Therefore yearly the said Richard Irving his heirs and assigns for-said to me my heirs and assigns waived and relief of the foresaid lands with their pertinents with the marriage of the heir when it shall happen &c. I the above named Agnes Herries with consent and assent of my said husband binds and charges us our heirs and assignees to acquit and for ever to defend All and haill the forsaid third part of the Twenty pound land &c. to the said Richard Irving his heirs and assignees foresaid to be free safe and sure at all hands and against all deadly."

"In Witness thereof I have subscribed this my Charter and appended my seal together with the seal and manual subtz of the said John Master of Maxwell my said husband. In token of his consent and assent to the premises at Dumfries the twenty day of May and year of God One thousand five hundred and forty nine before these witnesses, John Haypaith, David Maxwell, John Maxwell, Cuthbert Irving of Rogill (Robgill), and Mr John."

"David Neaper notar public sic subtz Agnes Herries led on the pen by David Neaper notar sic subtz David Neaper notar sic subtz John Maxwell."

The twenty pound land was the whole of what belonged to the Lord William Herries in Hoddom, except the ten pound land of Ecclefechan. His daughter Agnes got one-third, and that is what is represented by the ten merkland of Knockhill, Whitehill, and Duke's Close, which became the property of Richard Irving. The old Valuation Roll (1667) gives the Ten Merk land of Hoddom as Knockhill, Whitehill so far as lies in Hoddom, and Duke's Close. About a quarter of a mile down the river from Hallguards there is the "Duke's Pool." There is also the

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"Duke's Mill" close to, and the "Duke's Meadow" between Knockhill and Hallguards. Though there is no direct evidence as to the earliest residence of the Dukes of Hoddom in the early times except Knockhill, Bleau's and Moll's maps rather suggest the probability that the first Richard Irving lived at Hallguards.

It is not known what valuable services Duke Richard rendered to Lord and Lady Herries, but it is probably in connection with the driving of Lords Wharton and Lennox back over the border in 1548. No doubt the Duke of Hoddom would suffer severely along with his neighbours during Wharton's ruthless invasion, more especially as Hoddom was on the direct route of Wharton's march when he marched from Carlisle to Castlemilk and from Castlemilk to Annan in 1547.

The Duke of Hoddom was a supporter of Queen Mary, and fought at the battle of Langside in 1568. His neighbour, Lord Herries, was in command of the horse, consisting entirely of Borderers, mostly of his own adherents. Mary was defeated and fled, and I need not further refer to that disastrous part of her history. The adherents of the unfortunate Mary were afterwards treated very severely, and no doubt when James VI. and Regent Murray, on their march, in October, 1569, from Hawick to Dumfries, *via* Langholm and Hoddom, when they lay in camp at Castlemilk for two days, visited the Queen's sympathisers in the district with no gentle hands. On the 28th October, 1569, when James VI. with Murray encamped on the Water of Milk, "Sir James Douglas oblissit him to enter Edward Irving of Bonshaw in Dumfries on Sunday as Pledge for the haill Irvings of Bonshaw, their bairns, tenants, and servants." The same day "Adam Carlisle of Bryde Kirk and John Irving younger son of the Duke oblissit them to enter the Duke John Irving aldar (*i.e.*, senior) in Dumfries on Sunday to ly as Pledge for sic nowmer of the Irvings of Hoddom as salbe declarit that day under the pane of 2000 merks." "The whilk day Alexander Stewart of Garleiss oblissit him that Habbie Irving of Turnschaw, John Irving and Wat Irving his son shall appear in Dumfries. Also for John Irving of Trailtrow that he and his bairns salbe obedient to the lawis. Also Sir James Douglas of Drumlanrig oblissit him for Habby Irving and Jauffray Irvings sonnis to Habby Irving of Trailtrow that they shall be obedient to the laws 2000 merks."

I think the present representative of the Irvings of Trailtrow

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now resides at Dalton. Seventy years ago there was a Habbey Irving in Dalton.

In 1570 Lord Scrope made a raid into Dumfriesshire by order of Queen Elizabeth, to punish the inhabitants for the support they had given to Queen Mary. On 21st April, 1570, Lord Scrope reported that he had entered Scotland and encamped at "Heclefeaghan." He states that he had "burned the town of Hoddame, Maynes, Troltrow, Revel, Calpoole, Blackshaw, Sherrington, Bankend, Lowgher, Lowgherwood, and Hecklefeaghan." They burned Dumfries to the "Blackness of Ashes" and "took and cast down the Castles of Carlanock, Hoddom, Dumfries." In 1578 there was a complaint of Alexander Carlisle on the occasion of some controversy between him and Jonne Irving called "Windie Duke;" they had both been put in prison in Dumfries, Carlisle being kept there twenty-two months, Irving being let out on bail.

Caution of Jonne Johnstone of that ilk for the entry before the King of Wm. Johnstone of Kirkhill, Joeth Johnstone of Brunnell, and Ritchie Irving of Wormanbie when wanted under pane of £1000.

"Complaint of John Johnstone of that ilk, warden, that James Douglas of Drumlanrig, along with also the Carlisles and Irvings of Milflats and Turnshaw, Scottish outlaws, also the Grahams of Esk, Englishmen, together with the brother of Rosetreis Hucheon, the Grahams son, who married an Irving of Hoddom, with divers other broken men, went to the House of Boneshaw, and there by force and way of weir enterit therein and maisterfully set at liberty and take with them certain persons of the name of Bellis and Irvings to the number of 18, notorious robbers, which were warded by the said warden in the Tower of Boneshaw."

This rather looks as if the Laird of Boneshaw had not been at home, perhaps on purpose. Robert Grame, son of Hutcheon Grame of Netherby, married an Irving of Bonshaw and was slain, leaving a son called George, probably George of Renpatrick. Richard Grame, another son of Hutcheon, married an Irving of Hoddom. A sister of the above Richard married William Armstrong, alias Kynmont Willie, whom Buccleugh rescued from Carlisle Castle, and a son named Hutchin married a daughter of John Armstrong of the Hollas. These relationships account for

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the active assistance rendered to Buccleugh by the Johnstones and Irvings, and the friendly neutrality of the Grahams, who were not to be seen in the Debateable Land that memorable night, 13th April, 1595. The Johnstones lay at Stanwix and formed a rearguard for Buccleugh, and the Irvings were stationed further back to give all needful assistance if Scrope and his men ventured across the Eden.

In the year 1581 we find offers by Edward Irving of Bonshaw, George Grahame of Renpatrick, and John Irving of Knockhill, made to the Laird of Johnstone "and to the wyif and bayrnies" of the late William Johnstone in Hayhill, their kin, &c., for the offerers, their kin, &c., "for being on the field at the unhappe slauchtter of the said unqihile Williame," which they "sayrlie repent."

First. They offer full repentance in their hearts, "beseiking God of his infintle gudenes that we be newar on the feyld quhare ewar siclyike offensis be committit, and ernistle cravis forgevness for Godis sake."

Secondly. They offer "to try our innocens and to acquite ws and all ouris that nane of ws schot that unhappie schot quhareby the said William was slayne; not bare the said William no rankour in our harttis, and that be sic sufficient men as the Layrd of Johnstonn will appoint that we ar able to get or will do for us."

Thirdly. They offer George Irving, son to Edward, and "Christe the Grahame," son to George Graham, "to be enterit in the hous of the Lochwode to the Layrd of Johnstonn and thaire to byide sic tryale as the layrd will appoint that nane schot the sayde schot," and if either of these be found guilty of shooting the said William the offerers consent to their punishment without any prejudice to this offer.

Fourthly. They offer to attend at any place appointed by the Laird and "his wyise freynds" and there in their linen clothes to kneel and ask forgiveness, and in token of homage and repentance take their naked swords by the points in their hands and offer them to the Laird, bairns and friends of the said William "in maner of sufferage" as may please them.

Fifthly. They offer "to be bound as husband and father to the saidis wyif and bairnes" in all their affairs, and to take part with them against all who would do them wrong, except the

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King, their landlords, "and sic otheris as we haif committit the lyike offence against."

Sixthly. They offer the sum of 500 merks to the family of deceased; and

Seventhly. Will increase their offers if the above are not accepted, the Laird and his friends to be judges. And finally they humbly crave forgiveness for the love of God. Dated February, 1581-82, the parties signing by Thomas Scot, notary, in presence of John Johnstone of that ilk, and Andrew Johnston of the Kirktown.

The John Irving of Knockhill mentioned in the above appears to have had two sons, Richard and John. Richard succeeded to Knockhill, and John to Whitehill and Duke's Close. This John, commonly called "Jock o' Milk," the subject of the old Border ballad Duke of Milk, was celebrated as a rider and raider.

Richard Lowther, the English Warden, refers to him in the following letter to Lord Burghley, dated Carlisle, 10th March, 1593:—

"My son and servants, while on the watch for Scottish thieves, took four, one named John Irvine, of whom I had before been written to both by Lord Hamilton and Carmichael (Scottish Warden) and of whom the Lord Herries complained while at London. I have sent Irvine to Lord Hamilton and Carmichael, whom I wish to 'pleasure' rather than to Herries, and hope you will approve."

He formed the subject of a conversation between James VI. and George Heriot, in the Fortunes of Nigel:—

"D'ye mind, for thou wert in maist of our complots, how we were fain to send sax of the Blue-banders to harry the Lady of Logenhouse's dewcot and poultry-yard, and what an awfer plaint the poor dame made against Jock o' Milch and the theivis of Annandale, wha were as sackless of the deed as I am of the sin of murder?"

"It was the better for Jock," said Heriot, "for if I remember well it saved him from a strapping at Dumfries, which he had well deserved for other misdeeds."

"Ay, man, mind ye that?" said the King, "but he had other virtues, for he was a tight huntsman, moreover, that Jock of Milch, and could halloa to a hound till all the woods rang again.

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But he came to an Annandale end at the last, for Lord Torthorwald ran his lance out through him."

I have previously stated that Richard Irving succeeded to Knockhill, and that John (Jock o' Milk) got Whitehill. Richard, who was in most of the troubles of the time, died about 1620, and was succeeded by his son Richard, known as the Young Duke. This Richard left three daughters, Margaret, Barbara, and Janet. Meanwhile Jock o' Milk's son, John Irving the Lang Laird, married a Johnstone, and their son, John Irving of Whitehill, married Margaret Irving of Knockhill. Barbara married William Johnstone of Myrhead (Lockerbie), and Janet married George Irving of Braes. John Irving of Whitehill, son of the above John Irving and Margaret Irving, married Mary Bell, and on behalf of his mother and two aunts signed a disposition of the lands of Knockhill to George Johnstone, son of Andrew Johnstone of Lockerbie, in 1665.

After the Union of the two Thrones of England and Scotland, the Borderers for a good many years were in a transition state. Many complications as to ownership of lands and for loans had arisen, which led to a great deal of litigation, into which there entered a good many border tactics. The records of the Law Courts contain many examples of acts of violence, in which the Dukes of Hoddom and their followers figured.

In 1657 Parliament passed "An Act for the better suppressing of Theft upon the Borders of England and Scotland, and for Discovery of Highwaymen and other Felons."

In the Book of Caerlaverock, Vol. II., page 498, the following appears about the Irvings' Respite by James VI. to Sir James Johnstone and 8 score others for the slaughter of John Lord Maxwell, warden, Dec. 1593, including John Irving of Lus, Habbie Irving of Turnschaw, Richie Irving in Staikcleuch, and Ekkie Irving, his brother, William Irving called Kange, Edward Irving of Bonshaw, and his sons.

Turnschaw is on the opposite side of the River Annan, close to Woodcockair, and nearly opposite Meinfoot. In the old maps it is represented as a place of importance, but is now known as Upper Bridekirk and a farm-house called Turnschaw Head.

"John Irving of Turnschaw having been transferred from Edinburgh Castle to James Chene of Streloch and escaped from him, forfeited 3000 merks."

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"Richard Irving of Robgill, William Irving of Skallis, and 50 others, destroyed goods belonging to Maxwell of Nether Redik."

"Complaint of Herbert Maxwell of Cavens against Ritchie Irving in Hartildill and James Irving in Trailtrow outlawed."

"Decree for Bessie Miller and others against Jock Armstrong and Jock Irving in Stanheuch on a charge of Spuilzie and slaughter."

"Suspension of horning (outlawry) obtained against Lady Newbie and Richard Irving of Hoddom by the laird of Johnstone."

"John Maxwell of Conhaith and Robert Herries of Hillilour for Elizabeth Stewart Ladie Newbie 1000 merks, and for Richard Irving Duke of Hoddom 500 merks, to answer before the Council on the 24th the complaint against them by Sir James Johnstone of Dunskellie."

"Complaint against them by Sir James Johnston of Dunskellie for intromitting with the corns growing on the lands of Newbie."

"Mr J. Johnston, advocate for Abraham Johnston, brother of Robert Johnston on Brighome, to pay to the treasury 10 merks for his escheat through being denounced rebel at the instance of Elizabeth Stewart, relict of John Johnston of Newbie, for his not desisting from intromitting with the maills of the living of Newbie."

Richard Irving of Knockhill is a witness (in a trial).

"Minute Book of Progress Suspension of Lawbarrowis, Richard Irving against the Lord Herries."

John Irving, called the Lang Laird of Hoddom, and his son, the Young Laird of Hoddom, were tried for Raiding, the elder was acquitted, the younger was banished the land.

On the 21st June, 1621, we have the complaint of Robert Maxwell of Dinwoodie how the laird of Wamfrau and others, and Richard Irving, called "the young Duke of Hoddom," came and destroyed his peats and chased his cattle with the buttends of their lances, so that some were left dead on the ground and others broke their legs. Had to find security.

In 1622, caution by Richard Irving of Knockhill that Andrew Murray of Moryquat shall not molest John Gibson in Kirkwood, bound in 390 merks.

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"In 1622 James Irving of Cleucheld (now Mountannan) acted himself as cautioner and souertie for Edward Irving, son to Jaffray of Robgill."

"Court held in Dumfries, Feb. 12th, 1623, Wat Bell in Middleshaw becomes cautioner in 500 merks for Jok Bell."

"Jaffray Irving becomes cautioner in 500 merks for David Irving in Middleshaw." Middleshaw was a third of Castlemilk.

"Hob Irving in Todhoilles becomes cautioner in 500 merks for John Irving in Woodheld in Stapletown."

"John Bell in Albie cautioner in 500 merks for Christie Irving called of Rogill."

"Willie Bell, called Reidcloak, becomes cautioner in 1000 merks that Robeine Bell and Jok Bell in Carruthers will appear in next court."

"Court held in Dumfries 1623.

"Pannell consists amongst others of Richart Irving called Gawines Richie."

"Geo. Colthart charged with resetting and maintaining Richie Irving in Wodhouse and Jaffray Irving of Robgill, fugitives and outlaws. (Acquitted.)"

"On April 23rd, 1623, Court held in Dumfries. On hair John Irving, called Lang Laird of Hoddom; James Irving, his brother; and Jean Johnstone, his spouse, ar accusit for airt and pairt of the thifteous steilling of seven gaitt furth of the lands of Brockshaw at several times pertening to Elizabeth Hardie and for the cruel burning of ane barn of corne beir quheit and ry purtaining to William Bell in Holmhead. Acquitted."

"At a court held at Jetborough, August 28th, 1622, John Irving, young Laird of Hoddom, was accused of steilling twa ky out of the lands of Gimmenbie and tuk them to a sheep house in Hoddom. (Acquitted)."

"At the same court held at Jetborough, August 28th, 1622, 23 persons declared fugitives and outlawed for no appearance, amongst others John Irving called Ritchies Jokkie in Bankhead."

"At a court, held at Jetborough, 19th April, 1623, John Elliott, that came from Carleill, and Edward Irving, son to Lang Will of Hoddom, acted themselves to depart presently from Scotland and never to return without the licence of the Lords of Council under pane of death."

George Johnstone, to whom Knockhill was disponed, married

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Isabel Weir of Edinburgh in 1670, but died in 1672, leaving an only son Andrew. This boy's mother married again in 1675 John Stark of Killearmount in Ayrshire.

In 1702 John Irving, son of John Irving and Mary Bell, married Isabel Stark, daughter of John Stark and Isabel Weir Johnstone or Stark, so that Andrew Johnstone and John Irving's wife were half-brother and sister. This John Irving seems to have been a good business man, and was concerned with the management of James Douglas of Dornock's extensive estates as long as he lived. In 1743 he gave most detailed evidence as to the rentals and boundaries before the Commission for enclosing Hoddom Common. Dornock was the second son of the Earl of Queensbury, and was brother to Kelhead. He married a daughter of Sir James Johnstone of Westerhall, and his son Archibald Douglas, who married a daughter of Sir Patrick Maxwell of Springkell, sold the Dornock estate and bought that of Castlemilk.

John Irving and Isabel Stark left a son, John, who died unmarried in 1777, and left a will, dated 12th June, 1773, by which he "bequeathed in favours Agnes, Mary, and Philadelphia Irvings. my sisters germain, in liferent for their liferent use allenarly, during their joint lives and the life of the longest liver, except the share of the said Mary Irving as aftermentioned, exclusive always of the jus marite of their respective husbands (Mary Irving married Thomas Bell), and to William Bell, writer in Edinburgh, my nephew and the heirs of his body failing to John Carruthers of Braes also my nephew and the heirs of his body whom failing to John Carruthers of Denbie also my nephew son to Mary Carruthers sister to the said John Carruthers of Braes and my niece and the heirs of his body, whom failing to my heirs and assignees whatsomever heritably and irredeemably All and whole my Lands of Whitehill and Dukes Close lying in the Parish of Hoddom, and shire of Dumfries As also all and whole my lands of Holmfoots of Whitehill lying in the Parish of Saint Mungo." . . . ? . . . He also granted power to Infeft by "Staff and Bastion as use is" . . . The successors were to "take and bear the sirname and designation of Irving of Whitehill and make Whitehill their place of residence and those succeeding to them in the said lands in virtue hereof shall do the like." He also bequeathed all debts due to him, and "particularly" a "debt due to me out

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of the Estate of Dornock, another debt due out of the lands of Cocket Hill being part of the Estate of Rummerscales, another due to me out of the Estate of Knockhill, another due to me out of the Estate of Castlebank; as also a debt due to me by John Carruthers of Holmains, another due to me by Bonshaw, and another due to me by Janet Knox of Kirkconnell."

His heirs were also "to erect a handsome monument upon "the graves of John Irving and Isobell Stark, my father and mother."

"After the death of Thomas Bell his son, William Bell, assumed the name of Irving, and ever since the family name has been Bell-Irving."

The Bells, known as the Bells of Milk, were for generations settled on the Water of Milk, and Will Bell, the son of Thomas Bell and Mary Irving, who assumed the name of Bell-Irving, was the grandson of George Bell of Stronds (now Milkbank), Skellyholme (now Glenholm), and Bankside. Agnes Irving married John Carruthers of Braes, her daughter married John Carruthers of Denbie, and their son, Colonel Carruthers, afterwards succeeded to their property.

The close relationship between the Johnstones and Irvings led to a long law suit between the lairds of Knockhill and Whitehill as to the division of the property, Whitehill having a claim of over £4000 on Knockhill. The matter was not finally arranged until 1794.

About the beginning of the 19th century Knockhill was occupied by a Captain William Ogle, son of Henry Ogle of Causey Park, a scion of the ancient noble family of the Ogles of Ogle in Northumberland. The then John Bell-Irving, father of the present laird, married Miss Margaretta Ogle, hence the introduction of the name Ogle into the Whitehill family.

The following Genealogical Tree will illustrate the previous notes:—

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IRVINGS OF HODDOM, 1549 TO 1900.

1549. Richard Irving, commonly called Duke Richard.

1569. John Irving, commonly called Duke of Hoddom.

1605. Richard Irving, called Duke of Hoddom.

1621. Richard Irving, Do.

1665. Margaret, Barbara, Janet.

John Irving, called Jock of Milk.

John Irving, called The Lang Laird.
Jean Johnston.

Son, John Irving of Whitehill.
Margaret Irving, of Knockhill.

Son, John Irving.
Mary Bell.

Son, John Irving.
Isabel Stark, stepsister to Andrew Johnstone.

Son, John Irving, unmarried.

Mary Irving.
Thomas Bell.

Nephew, William Bell-Irving.
Margaret Dempster.

Son, John Bell-Irving.
Margaretta Ogle.

Son, John Bell-Irving.
Mary Jardine.

(The present Laird.)

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JOHNSTONES OF KNOCKHILL—1665-1799.

In 1665 the estate of Knockhill was sold by John Irving of Whitehill to George Johnstone, a writer in Edinburgh, after having been in the possession of the Irvings for 116 years. George Johnstone was described as son to Andrew Johnstone of Lockerbie, and said to be a descendant of the Johnstone, probably a grandson, who fought so bravely at Dryfe Sands (6th Dec., 1593), whose wife was said to have killed Lord Maxwell. George Johnstone, before he acquired Knockhill, appears to have been the owner of Gimenbie. In Dryfesdale old churchyard there lies, or did lie, a flat antique gravestone on which may or might be deciphered the name "Johnstone of Gimenbie," dated about 1680, and adjoining the old aisle belonging to the Johnstones of Lockerbie. This William Johnstone acted as second to his chief, Sir James Johnstone of Lochwood, on the occasion of a hostile meeting between him and Lord Maxwell on the summit of Crochmede, a ridge between Annandale and Nithsdale, in 1608, when Sir James fell by the hand of Lord Maxwell, who is said to have shot Sir James in the back with a pistol while the preliminaries of the duel were being arranged. Lord Maxwell fled from justice, and was tracked by William Johnstone through Holland, Denmark, and Norway, and back to the North of Scotland, where he was taken and subsequently tried and executed in the Grass Market of Edinburgh for the crime.

The stone containing much of the above was there in 1775, but has long since disappeared. In some documents it is said the Lord Maxwell who was killed at the battle of Dryfe Sands fell in combat with this same William Johnstone, but this is not certain. This same family of Johnstone subsequently lost Gimenbie and Millantae, which they also had, and acquired Knockhill.

George Johnstone was described in the disposition as a son of Andrew Johnstone of Lockerbie. He married Isabel Weir, daughter of Archibald Weir of Edinburgh and Elizabeth Hamilton, in 1670. Issue of said marriage, Andrew Johnstone.

George Johnstone died two years after his son was born, and his widow Isabel Weir married John Stark of Killearmont. Isabell Stark, a daughter of this second marriage, married John Irving of White Hill. Andrew Johnstone was therefore her half brother.

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The disposition of the lands had already been settled, but a claim in connection with the marriage settlement of Isabell Stark, due by Knockhill to White Hill, began in 1672, and was only finally settled between Andrew Johnstone and William Bell-Irving in 1794, a nice gangin plea that kept its legs for 122 years.

"George Johnstone was succeeded by his son Andrew Johnstone. On 25th October, 1694, John Sharp of Hoddom as superior granted a precept of Clare Constat in favour of Andrew Johnstone as heir to his father (deceased) George Johnstone, writer, Edinburgh, of the third part of the £20 land old extent of Hoddom, extending to ten merkland of the same extent, with houses, buildings, gardens, tofts, crofts, onsets, insets, privileges, parts, pendicles, and pertinents of the same whatsomever, which lands above written at one time belonged heritably to the late Richard Irving, known as 'Duke's Richie,' lying within the parish of Hoddom, &c., &c."

On 23rd May, 1710, Andrew Johnstone granted a bond for £1800 Scots upon the lands of Knockhill to George Sharp of Hoddom, of which he was also superior, upon which infeftment followed. At Whitsunday, 1713, upon the death of Andrew Johnstone, Knockhill fell into the hands of John Sharp of Hoddom by virtue of the ward, and continued with him and his son George till Whitsunday, 1721, when James Johnstone, son of Andrew, obtained possession of the same. The above James Johnstone, though very young, joined the Rebellion of Mar in 1715, and fought at Sheriffmuir and Falkirk, and was afterwards banished to the West Indies, from which he returned in 1722.

In 1736 a bond was granted on Knockhill by James Johnstone in favour of John Irving of Whitehill and his spouse Isabel Stark, but Johnstone never fulfilled his part of the contract, and matters drifted on till 1745, when Andrew Johnstone, the last laird, son of James, "enlisted into Prince Charles' army behind Pate Irving's peat stack in Ecclefechan," and James himself being suspected of giving aid to the rebels had to fly the country. Andrew was taken prisoner, tried, and condemned to be executed at Carlisle, but was afterwards pardoned and deported to the West Indies.

When under sentence of death he wrote the following letter to Whitehill :—

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1746—"Dear Sir, I am informed that you have done all that lay in your power to assist me in my present situation, but according to the advice of my lawyer I pled guilty, hoping to be recommended to mercy, but I am afraid that little will be shewn to any but such as can make interest at Court either for pardon or transportation. May God Almighty prosper you in all your undertakings for shewing as much humanity as you have done to him who did not deserve it at your hand."

In a subsequent letter, after he had got a transportation pardon, he wrote again in the following terms:—

"I am daily expecting to leave this place for Liverpool in order to embark for transportation, and God knows I am ill provided for it." He then goes on to mention having applied to numerous friends in vain, and makes a request of Whitehill to make an advance to him, with which he very readily complied.

John Irving subsequently entered into possession of the lands of Knockhill, but commiserating the unfortunate position of James Johnstone and his son Andrew, he allowed the tenants to make payments to them from time to time, and soon himself assisted them with money, as appears from their letters, whilst Johnstone's daughters and a younger son James continued to live at the Mains of Hoddom.

John Irving was also in sympathy with the Jacobite rising of 1745, but no doubt his age, sixty-three, kept him at home. The following names of "rebels" are included in the list returned by the supervisors of Excise on May 7th, 1746:—"John Irving of Whitehill was active in pressing horses for the service of the rebels, and threatening the constables who would not assist."

James Leslie Johnstone of Knockhill and Andrew Johnstone, his son, carried arms with the rebels from the time they left Edinburgh till they dispersed. William Johnstone of Lockerbie, Edward Irving of Wyseby, William Irving of Gribton, and James Irving, his son, were also implicated. After the Act of Indemnity passed in 1749, James Johnstone again entered on the management of Knockhill.

In the Session Records appear the following entry:—"June 24th, 1753, John Brown the Frenchman (otherwise John Brutlie) and Margaret Johnstone, daughter to James Johnstone of Knockhill, compeared before the congregation and was rebukt for their irregular marriage, and absolved from the scandel yrefe."

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John Irving of Whitehill, son of the one mentioned as assisting the rebels with horses, never took any action against him with regard to the deed until 1765, when Andrew Johnstone returned from the West Indies, where he had prospered. He then brought an action for payment before the Court of Session, but Johnstone having soon thereafter returned to the West Indies, nothing was done in the submission of the case.

Andrew Johnstone again returned from the West Indies to Knockhill, and in 1787 William Bell-Irving had the whole law business up again before the Court of Session. This was finally arranged in 1794.

The following is a copy of the "Inventory of Writs delivered to Mr Alexander Orr, Writer to the Signet, when Knockhill debt to Hoddom was paid."

1. "Charter of all and haill the third part of all and haill the twenty pound land of Hoddom of old extent, extending to a ten merk land of old extent lying within the parish of Hoddom and Stewartry of Annandale, granted by James, Earl of Southesk, to and in favour of George Johnston, writer in Edinburgh, dated 15th August, 1666."

2. "Instrument of Sasine proceeding upon a Charter of apprysing by the said James, Earl of Southesk, of the said lands in favour of Sir Charles Erskine, Baronet, dated 29th August, 1666, and registrate in the general Register of Sasines at Edinburgh, 11th September, said year."

3. "Instrument of Sasine proceeding upon an heritable Bond of Corroboration granted by Andrew Johnstone of Knockhill to John Sharp of Hoddom, dated the 9th of May, 1696, and registrate in the general Register, 27th day of said month and year."

4. "Charter of Adjudication granted by John Sharp of Hoddom to and in favour of Isobell Stark, spouse to John Irving of Whitehill, of the said ten merkland of Knockhill, dated 6th July, 1714."

5. "Instrument of Sasine following thereon in favour of the said Isobell Stark, dated 28th October, 1714, and registrate at Dumfries 19th November said year."

"Edinburgh, 23rd March, 1767.—Received up by me, Clerk to Alexander Orr, Writer to the Signet, the writs in the above Inventory from George Muir, Writer to the Signet."

(Signed) WILLIAM DEWAR.

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At the enquiry into the various common rights in the parish in 1743 there was a dispute between Sharpe and the adjoining owners as to a place called Greenwoodshaw, now part of Meinfoot Farm, which Sharpe of Hoddom stated he had acquired from Johnstone of Knockhill in 1694 in satisfaction or part satisfaction of the debt incurred in 1710 to George Sharpe, and in support of his contention produced the following documents :—

"Deed of Spuilzie before the Lords of Session at the instance of Wm. Armstrong in Bogside and John Irving of New Orchard against John Sharpe of Hoddom and others dated 16th February 1712."

"Charter by the Earle of Southesq in proceeding upon an apprising at yd instance of Mr John Alexander against Rob Irving of Knockhill and an oyr apprising in favour of Sir Charles Areskin of Cambo against Mr James Alexander son and heir of the said Mr John Alexander wh. Charter is dated 18th August 1666."

"Instrument of Resignation by Andrew Johnstone of Knockhill in favours of the said John Sharpe of Hoddom of Greenwoodshaw extending to four acres or yrby possest by George Corrie in Hoddom, dated 28th December, 1694, regt. Drumfries the 3rd of Jany. yrafter."

"Obligation by John Irving of Whitehill in favours of the said John Sharpe whereby the obligant as adjudgee of the ten merkland of Knockhill is bound to ratify the said John Sharpe his right of those parts yrof called Greenwoodshaw, Huttonsbog, and Bushyards when required for that effect, dated 7th July, 1714."

"As also there was produced by James Lesly Johnstone of Knockhill cited at the instance of the psr as a havor of writis for proveing the payment aforementioned Translation by the said John Sharpe of Hoddom in Implement of an Agreement yrin mend dated the.....day of.....1694."

His son, Andrew Johnstone, the last laird, went out in 1745 and fought at Prestonpans and Culloden, was captured, tried, and condemned to death at Carlisle. After lying in Carlisle prison for some time he and others were transported to the West Indies. He returned to Knockhill and built the present house. It is supposed he pulled down the old tower which, as far as I have been able to make out, stood a few yards in front of the present house, where some large trees are growing. He lived to a great

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age, and died about 1798 or 1799. The late Charles Stewart of Hillside, writing in 1862, "said he had a shadowy remembrance of the tall bent figure of the old cavalier, who was regarded with a sort of romantic respect by our country people, among whom passed many a story of these lairds of Knockhill. Said he had heard especially from old Colonel Carruthers of Denbie, who personally knew the last laird, their extraordinary feats of personal bravery in battle, and also of the remarkable coolness and even jocular hilarity of the last laird when under sentence of death. His good and ladylike widow, who survived him a few years and lived at Bankside, excited the talk of our more bigoted Presbyterians at the scandal of having the burial service of the Episcopal Church (to which she was strongly attached) read by a most worthy Scotch clergyman at her burial in Hoddom Churchyard. The only remnant of this old family that I know of is the proprietrix of Catlinns in Dryfesdale, who is a descendant of the Knockhill of 1715. The family were distinguished for their fidelity and devotion to the cause they thought right, and for the courage, gallantry, and determination of characters of these Johnstones of Gimmenbie and Knockhill."

In 1794 Andrew Johnstone was entered in the list of 39 Volunteers from Hoddom. Charles Sharpe, D.L., signed the declaration first and Johnstone second. The list was also signed by Wm. Bell-Irving of Whitehill. Andrew Johnstone died in 1798 or 1799, and was interred in Hoddom Churchyard. I regret I have not been able to find his tombstone. There is a very old aisle called Knockhill aisle on the south side of the church, which appears to have been built against the wall of the old church pulled down in 1816, and shewn upon the photograph which accompanies this paper. The Johnstones may have been interred there, but there is no inscription of the name. The Scott family is buried there. The masonry of the aisle indicates a much older date than the beginning of the 19th century. It is probable that the Johnstones' stones have been covered up.

I have not been able to trace the history of John Brown (the Frenchman) and Margaret Johnstone. There may be some of their descendants living.

After the death of Andrew Johnstone, Knockhill was sold to Mr Lascelles, a member of a Yorkshire family, who appears to have got possession at Martinmas, 1801. He does not appear to

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have been very well provided with money, for Sharpe of Hoddom had a good deal of difficulty, according to a letter from Andrew Macwhinnie, his law agent, in getting paid the "Compositi agreed upon for your charter of the Estate of Knockhill to Mr Lascelles, Being £300 and 2 years feu duty of that Estate to Martinmas last, £2 6s 6d, in all £302 6s 6d. This was paid on 6th July, 1804. Lascelles had granted a Bill upon a Brother in England for the Needful, but his legal agent, Mr Young, delayed advancing the money until he got advice that the Bill was paid." Very prudent.

Andrew Macwhinnie, Hoddom's law agent, in advising the above, said "the matter was now settled and I think much to your advantage, as I believe they were entitled to have deducted a fifth part of the Gross Rental for Teind, in place of £19 19s 6d, the valued Teind."

Lascelles was not on friendly terms at The Castle. Mr C. K. Sharpe, writing to his sister, hoped he would never be allowed to enter Hoddom Castle again, and described him as one of the leading wasps in the hornet's nest of Dumfriesshire. It looks as if there had been some love affair at the bottom of C. K. Sharpe's dislike.

After holding Knockhill for a few years, Lascelles sold it to Alexander John Scott, who held it until he died on 26th April, 1834, aged 68 years. He was married to a Miss Helen Curll, and left a son, Alexander, who died in New South Wales, 16th February, 1850, aged 35. Another son, Gideon Andrew Scott, was drowned on his passage home from New South Wales, 8th January, 1863, aged 41. I am informed that there is a daughter of Alexander John Scott still living. The Scotts came from the neighbourhood of Langholm. I am indebted to a correspondent for the following interesting communication:—

"About the latter end of the 18th century there were some families of the name of Scott in Eskdale, dry stone dykers. A son of one of these Scotts emigrated to the West Indies and was not heard of for many years. In the course of time a letter came from him to all his relations, saying that he was very much in want of money at that time, and that he would be much obliged if they would lend him as much as they could. Only one, Alexander Scott, stone dyker, responded to his appeal by sending him £30, all the money he had. Some years after the

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Built into inside wall Knockhill Summer House.

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West Indian planter died and left all his fortune to the stone dyker, somewhere about £80,000. The man married and afterwards bought Knockhill, for which he paid about £30,000. He had a family, who after his death sold it to General Matthew Sharpe about 25 years after, for about half that price. The daughters married, but the sons emigrated to Australia, where they died."

I am informed that General Sharpe bought Knockhill in 1841, and that the price was £15,000.

During the time that Mr Scott owned Knockhill it was the scene of a tragedy. A young man named Bell from the neighbourhood, who had been to see his sweetheart, was heard by the butler, who shot him when escaping through a basement window. The butler was tried and acquitted. It is needless to say that Knockhill was haunted by a ghost for some time after. The ghost made so much noise that they could not get the servants to stay. At last the owner got the Reverend W. Wallace Duncan, then helper to Mr Yorstoun, the Parish Minister, to go and sleep in the house. Whether it was the good man's saintly presence or his bodily powers that were disagreeable to the ghost no one knew, but the ghost saw fit to change its quarters and was no more heard of at Knockhill. A Colonel Little, a native of the neighbourhood of Langholm, who had been in the East India Company's service, was an occupant for a few years. He removed to York and died there. He was succeeded by Sir Patrick Heron Maxwell, Baronet, of Springkell, who was killed by a fall from his horse on 27th August, 1844. A few years after the death of Sir Patrick, Mr William Sharpe occupied it until his death on December 18th, 1875, in his 83rd year. After Mr William Sharpe's death it was sold to Edward Brook, Esq.

If anyone could write a history of the late William Sharpe and the doings at Knockhill in his day, it would make a most interesting volume. He was the most genial and hospitable of lairds, and Knockhill was perhaps the most unique and popular establishment in the south of Scotland. There all sorts and conditions of men were welcome if they were of the right sort, and many were the convivial evenings spent within its walls. Among the objects of interest at Knockhill were the string of racehorses, the greyhounds (among them "Hughie Graham," winner of the Waterloo Cup); then there were pets of all sorts—dogs, cats,

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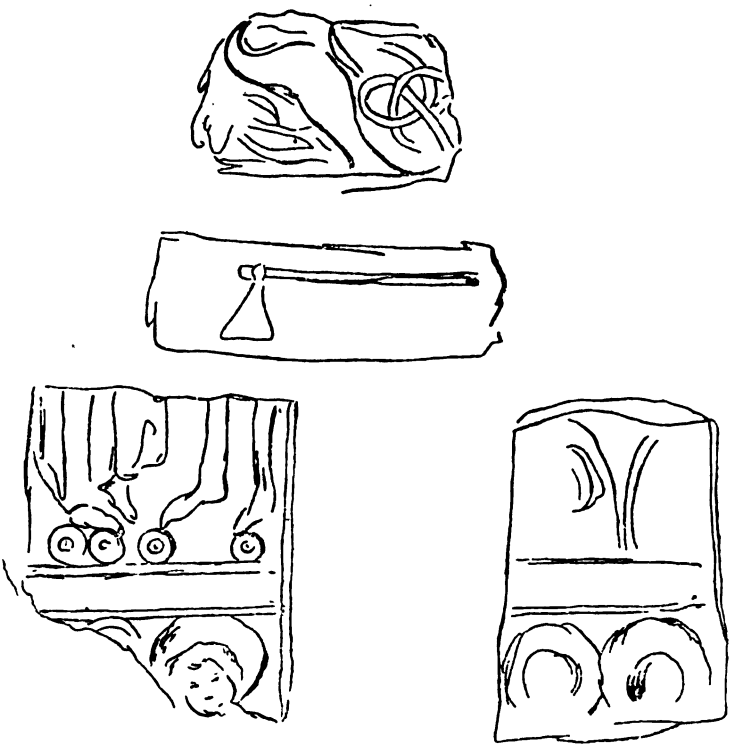

Built into Summer House Walls
Knockhill.

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peacocks (some of them white), pigeons, and piebald sheep with bells in front of the house.

Major Campbell Bedford, a nephew of the late William Sharpe, next occupied it until a few years ago, and was succeeded by the present occupier, Mr David Bell-Irving, Master of the Dumfriesshire Otter Hounds, a son of the present venerable Laird of Whitehill, and a descendant of good Duke Richard.

I enclose some sketches of a number of interesting inscribed and sculptured stones in a little summer-house in Knockhill grounds. Amongst them are two Roman inscriptions (Corpus Inscr. Lat., Vol. VII.), fragments of cross shafts of pre-conquest date much disfigured, and one or two mediæval stones. On one of the pre-conquest stones, a portion of a cross shaft, are the lower part of the two figures, the feet of each resting on two discs not unlike roller skates. Mr Romilly Allen writes that "They are a very interesting lot, and it is greatly to be regretted that they have been so knocked about. The style of the sculpture is Northumbrian, and apparently of the best period. The figures on wheels must, I think, be intended for the cherubims described in Ezekiel x. 8-22, who are the only creatures mentioned in the Bible as having anticipated the modern invention of roller skates."

There are also two stones, one inscribed "A Lor Burn" and the other the names of certain "Baillies" connected with Dumfries, but which were described by Mr James Barbour in the Society's transactions, Vol. XII., p. 99. It is rather a pity that these two stones are not in Dumfries. It is to be hoped that they will be well taken care of in the future.

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Built into Summer House Walls at Knockhill. Nr Ecclefechan

(See Vol. XII. of Society's Transactions, p. 117, with reference to Roman Inscription.)

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25th April, 1902.

The Rev. WILLIAM ANDSON in the chair.

Donations and Exchanges.—Boletin del Instituto Geologico de Mexico, Num. 15, 2nd part.

The Chairman referred to the recent death of Mr Arthur Bennett, F.L.S., Croydon, a distinguished botanist, who was an honorary member of the Society, and he moved that an expression of the Society's regret at his loss be recorded in the minutes, which was unanimously agreed to.

COMMUNICATION.

"*Lag's Elegy and other Chap Books.*" By Mr FRANK MILLER, Annan.

Mr Frank Miller, Annan, read a lengthy and valuable paper on Scottish Chap-Books, giving special prominence to the question of the authorship of "Lag's Elegy," and bringing under notice a number of other tiny volumes issued from the press of Dumfries and Galloway at a time when the population depended largely for its literature on the stores of the pedlar or "chapman." A most interesting series of the chap-books was shown, most of the copies being lent by Mr William Macmath, F.S.A., President of Edinburgh Bibliographical Society, who possesses an extensive and unique collection. Mr Macmath contributed the following note of stall songs and ballads from the Dumfries press seen by him:

Title-page of an 8-page pamphlet: "Garland of New Songs: Star of the East, Banks of Doon, Beautiful Hill of Dromore, Come sit down my Cronies, Anna. (Symbols of the sun, moon, and stars.) Printed for John Sinclair, Dumfries."

Title-page of another 8-page pamphlet: "The Bride's Burial, or The Affectionate Lovers, a True Love Story. Printed by C. M'Lachlan, for John Sinclair, bookseller, Dumfries."

Title-page of a third 8-page pamphlet: "The Duke of Gordon's Daughters. Printed for John Sinclair, Dumfries." "Duke of Gordon's Daughters" (page 2nd). (On 8th page—end) "Finis. Printed at the St. Michael Press, by C. M'Lachlan,

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Dumfries." (Cuthbert M'Lachlan was printing in Dumfries at least as early as 1794).

Title-page of 12-mo. volume, 62 pages: "The Surprizing Adventures of John Roach, Mariner, of Whitehaven, containing a genuine account of his cruel treatment during a long captivity amongst the savage Indians and imprisonment by the Spaniards in South America; with his miraculous preservation and deliverance by Divine Providence, and happy return to the place of his nativity, after being thirteen years amongst his inhuman enemies. Dumfries: Printed by Robert Jackson, 1788. Price sixpence." At end: "John Roach, Whitehaven." On a copy belonging to Mr S. R. Crockett is this note, at the end of the "Contents": "Mr M'lod, the Bookseller, minded seeing John Roach in 1788 going about selling this Pamplet of his advs, and he was semenly much worn, aparently above fourty, near Whitehaven."

As an early example of the work of the Dumfries press Mr Macmath sent a copy of "Sober-mindedness press'd upon Young People in a Discourse on Titus II. vi.," by Matthew Henry (1715). From the terms of the advertisement at the end (he wrote) it seemed probable that this was one of the first things Robert Rae threw off after he commenced business in the town. The advertisement was in these terms: "These are to give notice that any who have occasion to publish books, pamphlets, or print burial-letters, etc., may have them printed at Drumfries: And that booksellers, chapmen, and others may be furnished with several sorts of books, catechisms, and pamphlets, at reasonable rates, by Robert Rae, at his Printing-house in the Kirk-gate: and at his shop on the east side of the street, a little below the Fish Cross: where they may also have books sufficiently bound very reasonably."

After an introductory reference to the literary advantages of to-day, Mr Miller said: "In the seventeenth and eighteenth centuries there was no plentiful supply of literature at once good and cheap: consequently the masses were obliged to be content with the indifferent mental pabulum provided by the chapmen. In the days of the Stuarts these hawkers generally carried ballads or other broadsides which they recommended to possible purchasers in language like that used by Autolycus in describing his wares to the blushing Mopsa. The chapbook proper, which is a stitched tract of small size printed for sale by 'flying stationers,'

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was almost unknown in England previous to the eighteenth century. Next to London, Newcastle-on-Tyne was the English town in which chap-books were most largely printed. Two of the Cumberland towns—Penrith and Whitehaven—had a good share of the trade in cheap books, as no one who has examined the collection of tracts in the Bibliotheca Jacksoniana in Tullie House, Carlisle, can doubt. Probably owing to the fact that the agricultural labourers of the North of England had more curiosity than their brethren in the South, the literary wares of the chapmen were most readily disposed of in the Northern counties.

"The chap literature of England consisted mainly of religious discourses, new versions of old romances, lives of criminals, tales of the supernatural, and humorous stories. The attractiveness of the booklets was much enhanced in the eyes of rustics by their illustrations. These were generally printed from wood blocks, which had been used again and again, sometimes with a ludicrous disregard of appropriateness. Most chap-book illustrations are very poor, but occasionally the collector sees a good cut. It must not be forgotten that Thomas Bewick, at the commencement of his career, did some work for a Newcastle publisher of popular books.

"Though the chap-book or 'penny history' scarcely existed in England at an earlier date than the beginning of the eighteenth century, it seems to have been well known north of the Tweed in the last decade of the seventeenth century. A glance at Halliwell's 'Glasgow Merriments,' an account of a unique collection of 'penny merriments and histories,' printed by Robert Sanders at Glasgow, 1695-8, will shew how varied in character and excellent in quality was the cheap literature sold in the west of Scotland in the time of William III. (1).

"The chap-books of Scotland belong chiefly to two classes—the religious, including biographical sketches of eminent Covenanters and similar works, and the humorous. Tales of the supernatural and lives of noted criminals form a highly interesting if comparatively small part of Scottish chap literature.

"Prominent among the Scottish tracts of the religious class are the writings of Patrick Walker, commonly styled 'The Cameronian Pedlar,' though, as Mr Hay Fleming has shewn, it

1. Halliwell's tract is dated 1864. Only 25 copies were printed.

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is doubtful whether he ever carried a pack. (2) Walker was born in or about 1666, but the place of his nativity is unknown. Boldly declaring himself a follower of Cargill and Cameron, he was arrested when a mere boy and flung into the 'thieves' hole' of Linlithgow. Taken to Edinburgh he was examined by the Privy Council and sentenced to banishment for life. It afterwards leaked out that Patrick had been present at the death of a trooper who had been slain by some Covenanters in self-defence. He was therefore brought before the Council again, and this time the thumbscrews and the boot were applied to him. Finding that torture could not extract a word from the brave youth his judges sent him back to prison, where he lay for many months. Transferred from one place of confinement to another he at length managed to escape from the clutches of his foes. Walker's first book, 'The Life and Prophecies of Mr Alexander Peden,' published in 1724, at once secured the favour of the intelligent and religious cottars of Southern and Western Scotland. His later works—'Semple Welwood and Cameron,' 1727, and 'Cargill and Smith,' 1732—though well received, did not make so deep an impression on the popular mind. The stalwart Cameronian survived till 1745, witnessing daily against 'the foul mismanagements of backslidden, upsitten, lukewarm ministers, elders, and professors." (3).

"More popular in Southern Scotland than even Walker's 'Peden' was a coarse and vigorous pasquil entitled 'Lag's Elegy.' As this work is of local interest, and as I have made a special study of it for a book on Dumfriesshire Poetry, ancient and modern, on which I am engaged, you will perhaps allow me to devote to it a large portion of my space. The plan of the poem is well indicated by its full title: 'An Elegy in Memory of that Valiant Champion, SIR ROBERT GRIERSON of Lag, or the Prince of Darkness, his Lamentation for, and Commendation of his trusty and well-beloved Friend, the Laird of Lag, who died Dec. 23rd, 1733. Wherein the Prince of Darkness sets forth the commendation of many of his best Friends, who were chief Promoters of his Interest, and Upholders of his Kingdom in the time of the Persecution. Very useful and necessary to be read by all

2. Six Saints of the Covenant (1902). Vol. I., p. 37.

3. Peden's Life: Author's Preface.

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who desire to be well-informed concerning the chief Managers and Management of the late Persecuting Period.' (4).

"Among the numerous champions of evil who are passed in review is Claverhouse, who receives the devil's thanks for his services, but is somewhat cruelly reminded of his flight from the field of Drumclog. Due honour is accorded to another famous soldier, the blood-thirsty Dalyell, and also to several eminent lawyers and statesmen, including Mackenzie, Rothes, and Lauderdale. Nor is Satan slow to acknowledge his indebtedness to the last two Stuart Kings for their strenuous efforts to root out Presbyterianism and advance the cause of Rome. But his warmest praise is reserved for Sir Robert Grierson, the laird of Lag, of whom he can say:

'Through all the large track of his time,
He never did my ways decline.'

"Instances are given of the services which had been rendered by Sir Robert in killing defenceless peasants; and, of course, the Wigtown affair is referred to. Having surveyed the private life, as well as the public career, of his favourite with profound satisfaction, the Prince of Evil remarks significantly:

'Now Lag lives hot and bien with me!'

"Sir Robert Grierson seems to have been a man of courage and capacity; but it may well be doubted whether even Dalyell pursued the infamous work of hunting down and shooting recusants with more manifest zest. It is not surprising, therefore, that a poem attacking his memory with peculiar force and malignancy was heartily welcomed by the peasantry of southern Scotland. The popularity of the 'Elegy,' which was published in Glasgow in the form of a chap-book of 24 pages, did not soon decline. Forty years after Sir Robert's death the tenth edition was reached, and four years later the eleventh appeared. Even in the first quarter of the nineteenth century the poem was reprinted and found many appreciative readers in rural parts.

"The interest with which we peruse 'Lag's Elegy' is enhanced by our knowledge that the piece was familiar to two Scottish writers of the first rank. Sir Walter Scott possessed a copy of the chap-book (5), which may have supplied him with

4. Sixth edition, Glasgow, 1757.

5. See "Letters from and to Chas. Kirkpatrick Sharpe Vol. I., 147.

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one or two hints for 'Wandering Willie's Tale'—the gem of 'Redgauntlet,' and one of the finest efforts of his genius. Probably one of the most effective touches in his description of Sir Robert Redgauntlet was suggested by this line in the 'Elegy":

'He bore my image on his brow.'

And it is not unlikely that he had a vivid recollection of the rhymster's picture of Lag sitting 'in the great chair' in hell when he represented the cavalier as pre-eminent among lost souls. For a deeper and sterner spirit than that of Scott the 'Lament of the Prince of Darkness' had attractions. As a youth Carlyle pored over the yellow pages of some copy of the pasquil, and possibly in the grim humour characteristic of so many passages in his writings the influence of the bit of rough covenanting verse may be detected.

"The 'Elegy' has been attributed to different authors. Carlyle told Mr John Carlyle Aitken that it was written by John Orr, the old schoolmaster so graphically sketched in the 'Reminiscences' as a man 'religious and enthusiastic, though in practice irregular with drink.' (6). But there is nothing to shew that Carlyle had documentary evidence in favour of his theory, which contradicts the tradition of his own parish and receives no support from anything known as to Orr's tastes and studies.

"Mr Macmath informs me that a copy of the 11th edition of 'Lag,' sold by Mr Richard Cameron, Edinburgh, a few years ago, bore below the date (1777) the following jotting in a handwriting evidently belonging to the eighteenth century: 'This Elegy wrote by Will. Wilson, scoolmaster at Douglass, about the year 1735.' (7).

"Wilson, who is remembered as the author of some pamphlets on the Non-Hearer question, was actively engaged in literary work about the date of Sir Robert Grierson's death. I have before me a beautiful sermon by Adam Kae, minister of Borgue, 'in the time of Scotland's purest Reformation, which was in the

6. Fergusson's 'Laird of Lag,' 158-9. Remces. by Thomas Carlyle, Vol. I., p. 38.

7. Mr Cameron's Catalogue, No. 154, 1896.

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year 1648,' edited and printed by William Wilson from a MS. in 1735. (8).

In the editor's introduction Charles II. is referred to as 'that vile abominable profane monster'—a description of the hated King as unflattering as the one in 'Lag's Elegy.' I am not aware that any rhymes bearing the name of Wm. Wilson were published as early as 1735, but about the middle of the century he offered to the public two little collections of bad verse. He had some connection with Tinwald, and it has been conjectured that he wrote the inscription on the Covenanter's tombstone in the churchyard of that parish. (9).

"But the weight of evidence seems to favour the claim of a third schoolmaster, William Irving, of Hoddom, who died in 1782. That Irving was the author is stated as a well-known fact in the following sentence from an article on Stewart Lewis, a native of Ecclefechan, published in an early number of 'Chambers's Edinburgh Journal': 'He (Lewis) was put for a short time under the ferula of the parish schoolmaster, a character famed in Annandale by the name of Dominie Irving, and still more generally known as the writer of a wicked satire called Lagg's Elegy, of which a copy might once have been found in almost every cottar's window in the south of Scotland.' (10). As the contributor of the article quoted was well acquainted with Stewart Lewis personally, it is highly probable that the Ecclefechan bard was one of his authorities for the ascription of the pasquil to Dominie Irving. Testimony in favour of Irving's claim is borne also by Charles Kirkpatrick Sharpe, who, in a note to some memoranda on Lag and his connections, condescends to name the writer of a poem which he despised as popular among the vulgar only. 'The Elegy on Lag,' he says, 'was written as I have heard by one Irving, a schoolmaster, ancestor of the author of Fair Helen of Kirkconnel and other poems, who some years ago, in a fit of insanity, cut his own

8. A Sermon concerning the Believer's siting under Christ's Shadow, Preached from Canticles ii., 3, by that faithfull minister of Jesus Christ, Mr Adam Kae, &c. Printed for and sold by William Wilson, schoolmaster at Broad-wood, in the parish of Carluke, 1735.

9. "Martyr Graves of the South of Scotland," chap. 24. (*Dumfries Standard* of 23rd May, 1894.)

10. No. 116, 19th April, 1834.

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throat in Edinburgh.' (11). In an article on 'Epitaphs and Sepulchral Inscriptions,' contributed to the 'Scots Magazine,' W. S. Irving, the bard who committed suicide, refers to the old Hoddom teacher as the author of 'Lag.' Citing a dozen satirical lines he says they are by 'old Mr Irving, the author of the well-known philippic upon the persecutors entitled Lag's Elegy.' (12). W. S. Irving was a native of Hoddom parish, and had devoted much attention to its literary associations. His testimony, highly valuable in any case, is almost conclusive if he was descended from the satirist, as Kirkpatrick Sharpe, who knew him personally, affirms. The bit of verse quoted in the article was written by Wm. Irving at the age of 75. An imposing monument of red sandstone, still one of the wonders of Hoddom Churchyard, had been erected: 'By James Clow of Land in memory of Mary Hunter, his spouse. She was Daughter of Robert Hunter, late in Middleshaw, and Sister to John Hunter, in Braehead, of Hoddam. She was a virtuous wife, a loving mother, and one esteemed by all that knew her. And to be short to her praise she was the wife that Solomon speaks of in the xxxi. chap. of the Book of Prov. from the 6 verse to the end.' On reading this inscription the grim old dominie drew a piece of chalk from his pocket, and wrote on the pedestal of the monument as follows:—

'She was the wife!' oh Solomon, thou fool,
To make a pattern o' this grubbing tool;
She clothe her house in silk and scarlet fine!
Say rather i' the linsey woolsey twine,
Her husband 'mongst the elders at the gate!
Yes—known for nothing but an empty pate,
For guzzling down whole chappins o' sma' beer,
And selling meal and maut a groat too dear.
Such were the honest silly *Clows*—say clowns,
Which every roll of honest fame disowns,
Who erst, like Moses, brake the ten commands,
That is the sacred relicts of the Lands.' (13).

11. Memoir prefixed to "Letters from and to Charles Kirkpatrick Sharpe," Vol. I., p. 18.

12. "Scots Magazine" for May, 1816.

13. The estate of Land included part of Birrens, where the great Roman Camp, lately excavated by the Scottish Society of Antiquaries, is situated. Numerous valuable antiques had been dug up in one of Clow's fields, but he would not suffer them to be collected and sent to a museum for preservation.

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"'Beelzebub's Advice to the Forestallers of Victual,' another piece composed by Irving in his old age, so closely resembles 'Lag' as at once to connect itself with that pasquil in the mind of the reader. It has never been published, but I have a MS. copy taken from the original in the possession of Mr Fairnie, headmaster of Ecclefechan Public School. Satan is represented as addressing the unscrupulous 'mealmongers,' who were growing rich through oppression, in these words:—

'Monopoly and forestalling
Practise with all your might,
Do not regard the cries of those
That are in heart upright.

That law of Love and Charity
Which Christ Himself shall use
In judging of Mankind at last
With all your hearts refuse.'

"I have been able to glean some information regarding William Irving from a fragment of his journal and common-place book which Mr Fairnie kindly lent me some time ago, and now permits me to exhibit in illustration of my paper. Where Irving lived before he was placed, at the age of 42, in charge of the school at Hoddom, is unknown to me; but as he occasionally visited Dumfries 'to see his relations' (14) it may be conjectured that he was a native of the county town or the neighbourhood. Like most poets Irving was very poor, and he seems to have had some difficulty in collecting the 'school wages,' which formed a considerable portion of his small income, and were as often received in the shape of butter or meal as in coin of the realm. At Hoddom he devoted much time to church work, being at once session-clerk and treasurer of the congregation. Amongst the miscellaneous contents of the little book owned by Mr Fairnie are sundry jottings relative to receipts and disbursements by the elder on account of the church. The minister of Hoddom during the greater part of Irving's residence in the parish was the Rev. Alexander Orr—a fact in which the origin of Carlyle's mistake as to the authorship of 'Lag's Elegy' may possibly be found. If Carlyle's informant first transferred the surname of

14. MS. Journal.

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the minister to the elder it would be easy in the second place to confound the two dominies.

"In his later years Irving produced no long poem, but occasionally, as I have shewn, he scribbled short pieces displaying some of the qualities so noticeable in 'Lag's Elegy.' That the old man had the heart of a child is delightfully evident from one entry in his diary:—'April 25, 1769. This day the weather turned warm, and the corn appeared above ground, the hawthorn took leaves, and the gowk cryed.'

"Irving died in May, 1782. He was buried in the churchyard of Hoddom, which is also the repository of the dust of Charles Kirkpatrick Sharpe, who often boasted of his connection with Lag, the Persecutor. Peeping from the long grass of the churchyard is a modest headstone bearing this inscription:—'To the memory of Mr William Irving, who was schoolmaster of this parish for 36 years. He died May 11th, 1782, aged 78 years."

"Turning our attention to works widely different in character from the Covenanting chap-books, let us now glance at the once-popular humorous writings of Dougal Graham, who is described by an admirer as—

> 'The wittiest fellow in his time,
> Either for prose or making rhyme.'

Dougal was born at Raploch, near Stirling, probably in 1724, attached himself to the Highland army in the second Jacobite rebellion, and held on till all the hopes of Prince Charlie were crushed on Drummossie Moor. Settling in Glasgow, he became so great a favourite there that when a new bellman was required for the city he obtained the post, which he held till his death in 1779. The ablest of his prose tales is entitled 'The Whole Proceedings of Jockey and Maggy.' This work is written with no small vigour, and shows a thorough knowledge of certain phases of Scottish life and character. In respect of language too it has value, being rich in expressive words which have long been obsolete. His 'History of John Cheap, the Chapman,' was more popular than even 'The Whole Proceedings of Jockey and Maggy.' If we may trust the account it gives of the life of the Scottish chapman of a century and a half ago that life was a hard one. Here is a brief extract describing one of John Cheap's experiences in a farmhouse: 'On the morning I went into the

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house (after having slept in the barn); the goodman ordered me the pottage pot to lick, 'for,' says he, 'it is an old property of chapmen.' Well, I had no sooner begun to it than out came a great mastiff dog and grips me by the breast, then turns me over upon my back, and takes the pot himself. 'Ay, ay,' said the goodman, 'I think your brother pot licker and you cannot agree about your breakfast.'

"Dougal Graham's works, which number more than a dozen, all throw much light on the national manners. But it should be kept steadily in view that he was a humourist delighting in exaggeration, and that he had no opportunities of studying the home life of any of those grave and rigorously virtuous men in humble life who abounded in every Scottish parish, his tales having no attractions for them. Valuable in many ways though Dougal's productions unquestionably are, it is not to be regretted that only antiquarians devote attention to them now. Coarser than even the novels of his great contemporary, Henry Fielding, they are quite unfit for popular reading. Like Chaucer's Miller, the Skellat Bellman of Glasgow—

> 'Nolde his wordes for no man forbere
> But tolde his cherlisch tale in his manere.' (15)

"As examples of Scottish chap-books treating of the supernatural, I would mention specially 'The Devil of Glenluce' and 'The Laird o' Coul's Ghost,' and as a specimen of the records of crime 'Sawney Bean and his Family'—all three being tales connected with Galloway. 'The Devil of Glenluce,' a work in which the ludicrous and the horrible are curiously blended, appeared originally in George Sinclair's 'Hydrostaticks,' 1672, and was repeated in his 'Satan's Invisible World,' 1685. Mr Macmath says the relation had a yet wider circulation in the separate form of a chap-book. The Glenluce fiend confined his attentions to a respectable weaver named Gilbert Campbell and his family, and his appearance was connected with a curse which had been uttered by Alexander Agnew, a sturdy beggar, afterwards hanged at Dumfries for blasphemy. Sinclair, who was Professor of Philosophy and afterwards of Mathematics in Glasgow University, died in 1696. I have seen a chap edition of

15. Morris's Chaucer, Vol. II., p. 98.

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another of his tales, 'The Marvellous History of Major Weir and his Sister.'

"'The Laird o' Coul's Ghost' purports to be an account by the Rev. William Ogilvie (16), Minister of Innerwick, East Lothian, from 1715 to 1729, of four conferences with the ghost of Thomas Maxwell of Coul, or Cuil, an estate in the parish of Buittle, and near Castle-Douglas. 'Coul,' after gratifying the minister's curiosity as to the state of the dead, &c., asks him to call on Mrs Maxwell and beg her to do justice to some persons who had been cheated by her husband.

"Reflecting how difficult it would be to convince the lady that he had really heard a voice from beyond the grave, the clergyman declines to undertake Maxwell's commission. The tale ends abruptly with this sentence:—'But dropping these matters till our next Interview; give me leave to enter upon some more diverting subject; and I do not know, Coul, but thro' the Information given to me, you may do as much service to mankind, as the Redress of all the Wrongs you have mentioned would amount to,' &c.

"I am informed by Mr Macmath that Thomas Maxwell was a 'man of business' with a bad reputation, and that his wife was Isobel Neilson, daughter of a Dumfries merchant.

"The chap-book is said to have been first printed in 1750. A few years ago an edition from the original MS., in the possession of the Rev. Dr Gordon, Glasgow, was published by Mr Elliot Stock, London.

"Ogilvie's account of the appearances of Thomas Maxwell after death is in parts as circumstantial as Defoe's 'True Relation of the Apparition of one Mrs Veal,' which I suspect suggested it. The following paragraph is full of touches fitted to compel the unsophisticated reader's belief in the whole matter as related:—'Upon the 5th of March, 1722, being at Blarehead baptizing the Shepherd's Child, I came off at Sunsetting, or a very little after. Near Will White's March the Laird of Coul came up

16. William Ogilvie, A.M., studied and was graduated at the University of Edinburgh, 30th December, 1706, ordained at London in 1712 as chaplain to the 7th Dragoons, presented by the Laird of Dirleton on October, 1714, and admitted 26th January following; died January, 1729, aged 40, in 17th ministry.—"Fasti Ecclesiæ Scoticanæ," part 1, p. 375.

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with me on Horseback as formerly, and, after his first Salutation, bid me not be afraid, for he would do me no Harm. I told him I was not in the least afraid, in the name of God, and of Christ my Saviour, that he would do the least Harm to me: for I knew that He in whom I trusted was stronger than all them put together, and if any of them should attempt even to do the Horse I rode upon Harm, as you have done to Dr Menzies' man, if it be true that is said, and generally believed about Dumfries, I have free access to complain to my Lord and Master, to the Lash of whose Resentment you are as much liable now as before.'

"'Sawney Bean and his Family' is the most blood-curdling tale in chap-book literature. Bean, who lived in the time of James I. of Scotland, was guilty of cannibalism, a crime to be punished in no common way, as he at length discovered to his cost. Lovers of the horrible who have not access to his life in the original chap-book form should read it in Captain Charles Johnson's 'History of the Lives and Actions of the most famous Highwaymen, Murderers, Street Robbers, &c., with the Voyages and Plunders of the most noted Pirates' (17), or in Nicholson's 'Historical and Traditional Tales.' (18.)

"Everyone remembers how superb a use of the ghastly legend has been made by Mr Crockett in 'The Grey Man.' From a letter which Mr Macmath has enclosed in his copy of 'Nicholson' I learn that the distinguished novelist possesses a copy of the chap dated 1737."

In closing his lecture (after a short reference to the chap-books of Ireland) Mr Miller remarked that this class of literature deserved more attention than it had yet received. If anyone would do for the British chap-books what Professor Child, with valuable assistance from Mr Macmath, did for the British popular ballads, he would earn the gratitude of all who are interested in literary antiquities.

Among examples of similar works shewn from Mr Macmath's collection was a four-page tract, entitled 'Dornock's Distress, a Tragical Dialogue,' and bearing the signature 'Ar. Douglas,' with an intimation that it was to be continued. In it

17. The first edition of Johnson's book (London, 1734) contains a picture of Sawney at the entrance of his cave.

18. Kirkcudbright, 1843.

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'Douglas, Dornock's rightful heir,' bewails his fate in being obliged to part with his estate, and pours maledictions on territorial magnates of the district and various lawyers for a share which he attributes to them in the business. The copy shown contains several letters on the subject addressed to Sir Walter Scott by Charles Kirkpatrick Sharpe, and three short marginal notes by Sir Walter. Another was an account printed at Kirkcudbright in 1805, of 'The Remarkable Trial of Jean Maxwell, the Galloway Sorceress, which took place at Kirkcudbright on the 28th day of June last, 1805, for pretending to exercise witchcraft, enchantment, conjurations, &c. By Alexander Gordon.' The poor woman was convicted and sentenced to be imprisoned for a year, and to stand once a quarter for an hour in the pillory or jougs.

9th May, 1902.

Mr JAMES BARBOUR, F.S.A. Scot., Architect, in the chair.

Exhibit.—The Rev. William Andson, on behalf of Mr M'Murdo, porter, exhibited a specimen of Seahorse or Hippocampus which had been brought from Bermuda by a sailor. Mr Andson stated that Mr M'Murdo had kindly presented the specimen to the Society's Museum, for which, on the motion of the Chairman, he was cordially thanked.

COMMUNICATION.

"*The Geology of the Dumfries Basin.*" By Mr JAMES WATT, Oaklands, Noblehill.

In the observations on the geology of the neighbourhood which I have now the honour to submit to the members of this society, it may be convenient in order to a clear apprehension of our subject if, in imagination, we take our stand on the top of the Corbelly Hill, from which, as we all know, a magnificent view can be obtained; the panoramic effect of which, however, is now sadly marred by the Convent buildings. The neighbourhood of which I propose to speak is the stretch of low-lying land

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surrounded by the range of hills not very far off. This area is encircled by the Kirkmahoe and Tinwald hills on the north and east; on the west by the Mabie, Terregles, and Dunscore hills; on the south by the Solway Firth, and is known as the "Dumfries basin." (In this paper I only take in a part of the basin.) I may remind you that the term "basin" in geology is applied to a depression in the strata in which beds of later age have been deposited. In this case the depression is in Silurian strata, and the over-lying deposits of later age are Permian sandstone and breccia. In the Thornhill basin the Permian deposits do not rest directly on Silurian strata as they do here. They rest there on carboniferous strata, with associated volcanic rocks —lava and tuff—so that the relations of the rocks there may be said to be of a complex character, while here they are quite simple. Of the rock deposits we shall speak later on, and give our attention in the first place to the superficial formation.

The hill upon which we are supposed to have taken our stand, and many other similar rounded elevations within the circle of the hills on both sides of the Nith, are masses of boulder clay or till. And not only are such elevations—drums or kames they are called—but the greater part of the whole superficial deposits of the district are also boulder clay. This formation attains its greatest thickness in low-lying ground, thinning off as we ascend valleys. It forms part of the "moraine profonde" or ground moraine which was formed and accumulated under the great ice sheet which covered the land during the glacial period, as Greenland is now covered. It covers a large portion of Scotland and Ireland, and is found in England and Wales to the north of the Thames and Bristol Channel. The appearance and character of boulder clay varies in different districts, and is determined by the character of the strata of the country over which the ice sheet has moved. In this district it is brick red, the colour of the prevailing sandstone, and from weathering within a few feet of the surface it is loose and easily worked, but in tunneling at considerable depths it is very much the reverse. In the excavation, some sixteen feet deep, for the cellarage of the recently-erected Convent buildings a typical section of boulder clay was exposed. It showed a mass of tough unstratified clay, including smooth and glaciated boulders (none of them very large), grits, greywackes, sandstone, and breccias, nests of gravel, and a large quantity of very fine sand,

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so fine that it goes by the name of "Flower of rocks;" good for mortar, and in this case highly appreciated by the builder. With regard to the striking gap in the hills through which the Dalbeattie road and line of railway is carried, Mr Watt said that he had been informed by a well-known Scottish geologist who knows this district well, but who does not allow his name to be given, that there is strong presumptive evidence for believing that this gap or gorge had been sculptured out by a pre-glacial stream, which had been dammed up and diverted by a great mass of boulder clay behind the hills, particularly at the part which is now the top of the gap. More might be said of examples of glaciation not far off, but it would be out of proportion to dwell longer on the subject, and we pass on to

RAISED BEACHES.

On the Stewartry side, following the road to Newabbey for a couple of miles, two strips of low-lying ground are noticeable for their strikingly level character. These are raised beaches, indicating former sea levels; their present position being due to a gradual elevation of the land. The whole of that strip of land extending from Troqueer Holm to Kirkconnell Moss is of this character. The oldest of these beaches, extending from Park to Cargenholm, has an average height of 50 feet above sea level. The lower beach—the Flats of Cargen—at a height of about 25 feet, indicates the more recent beach, and extends to the mouth of the Nith, but sloping gradually up to the 50 feet level. It may seem hardly necessary to mention that the 25 feet beach is a striking feature of many parts of the Scottish coast. The late Mr P. Dudgeon of Cargen made an important discovery indicating previous oscillations of sea level, as well as probably affording traces of neolithic man. During the sinking of a well through the raised beach at Islesteps the following section was passed through:—Sand, silt, &c., 15 feet; peat, 18 inches; stiff clay, 14 feet; while underneath the clay gravel was pierced. In the peaty layer the remains of a fir tree were found with its roots penetrating the underlying clay, and close by were discovered many bits of charred wood, bundles of moss, and traces of phosphate of iron. . . . In this section the clay (in which marine shells were found) evidently proves the presence of the sea; while the layer of peat, with remains of trees and charred

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wood, points to a relative difference of sea and land, the subsequent growth of terrestrial vegetation, and (unless the presence of charred wood can be accounted for by lightning or other natural causes) the presence of man. The stratified deposits above the peat indicate the submergence of the old land surface and the return of marine conditions." Mr Dudgeon communicated this discovery to the survey officers, who explained it as above.

CLAYS AND PEAT.

The chief deposits of blue clay, used for brick making on both sides of the Nith, are Hannahfield, now idle and supposed to be exhausted; and Ryedale, Troqueer, also, it appears, approaching exhaustion, as I am informed that the bed of workable clay, which at one time measured 18 feet, has now thinned away to half that thickness. These clays are of glacial origin. On the Dumfries side a sandy clay overlaid by peat has been largely found. The foundations of the new Library buildings are laid on this sandy clay overlaid by 10 feet of peat. Pieces of oak, birch, hazel, and hazel nuts were found buried in the peat; while close by, on the site of the Station Hotel, peat was absent, the foundations resting on sandy clay. The probability is that peat at one time covered all the low ground extending to Victoria Terrace, the peat having probably been removed and utilised by the residents of our ancient town in early days. From what is observable from the roads leading to Lochar Moss, it is evident that the Moss was in not very remote times of very wide extent, with here and there great drums of boulder clay and ridges of gravelly material standing up above the level of the moss. Kirkconnel Moss, extending from Dalscairth to Kirkconnel, at one time famous for the excellent quality of its peat, is now, happily, nearly all reclaimed and yielding food for man and beast.

UNDERLYING ROCKS.

The whole of the immediately underlying rocks of the Dumfries basin, as I have already said, are Permian sandstones and breccia. These rocks, again, rest uncomfortably on Silurian strata. On the eastern side of the basin the deposits are made up of alternating bands of sandstone and breccia. This belief, previously held, has been confirmed by the deep well borings of

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recent years; the official journal of the bore at Mr Carruthers' aerated water manufactory showing the following results:—

FORMATION OF STRATA PASSED THROUGH.

	Feet.	Inches.
Soil	4	7
Sandy clay and stones	5	2
*Gravel	21	3
*Gravel and sand...	4	1
Red sandstone (chiefly hard)	89	11
Breccia	3	6
Sandstone (hard)	5	0
Breccia	13	9
Red sandstone	11	1
Breccia (hard)	2	0
Red sandstone	2	10
Breccia	2	11
Red sandstone (hard)	5	4
Breccia (broken)...	1	7
Red sandstone (extra hard)	63	7
Breccia	12	7
Red sandstone (hard)	2	5
Breccia (broken)...	13	5
Red sandstone	46	8
Breccia	2	8
Red sandstone (extra hard)	10	0
Breccia (very hard)	4	6
Red sandstone	74	4
Total	403	2

A similar bore to the depth of 600 feet at the Gasworks gave practically the same results, the underlying Silurian rocks at that depth not being reached.

On the western side of the basin the deposits of sandstone and breccia do not alternate, but so far as I have been able to discover consist wholly of breccia, outstanding bosses of which may be seen in several places. It is well exposed in the course of the river at Cluden Mills. A conspicuous ridge extends from

* It may be noted that the "gravel" and "gravel and sand" are really forms of boulder clay or till.

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Terraughtie behind the shooting butts nearly to Cargen. The railway cutting passing through this ridge at Goldielea shows a good section. It passes under Lochar Moss, and is to be seen resting on Silurian strata on the other side. And the two rocks —Permian and Silurian—may be seen in the same relation near the bottom of the deep gorge in the Cargen below the Glen Mills.

The term conglomorate is often mistakenly applied to breccia. Conglomorate, or pudding stone, is a rock composed of a mass of rounded water-worn stones, all cemented together, usually by oxide of iron or carbonate of lime. Breccia is a similar rock, but instead of rounded stones it is made up of angular and subangular fragments. In this area the fragments of which it is made up are of various kinds of rocks, and of every size, up to half a ton. And further, it may be noted that the stones often have a glaciated appearance, closely resembling those found in true boulder clay. The view now held by many eminent geologists is that at many stages throughout the unknown and unknowable millions of years during which the crust of the earth has been slowly attaining its present development there have been many glacial epochs. Sir A. C. Ramsay and Professor James Geikie—high authorities in glacial geology—were of opinion that those breccias which here, and in other places, reach to so great a thickness, "indicate a glacial episode during part of the Permian period." And according to the same authorities the petrological character of the Permian rocks in the British area, and in other parts of the world where the system is developed, point to "the isolation of various large tracts (of an earlier sea), which thus became inland seas or salt lakes, like the Caspian;" and that "one or more of those inland seas covered large areas which now form part of central and northern England, and extended into southern Scotland and the north of Ireland."

The life of the period, on sea and land, in remarkable contrast with the antecedent carboniferous era, was much impoverished, and generally stunted and dwarfed in character. But it is interesting to remember that the footprints of reptiles moving in a southerly direction have been found on the Corncockle sandstone. And it is to this discovery we owe the witty, but now rather hackneyed, remark of Dean Buckland, "that even at that early date the migration from Scotland to England had commenced."

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Mr Service moved a vote of thanks to Mr Watt for his paper. He had listened to papers on the same subject by the late Dr Gilchrist and Sir William Jardine, and he thought Mr Watt's distinctly advanced their knowledge of local geology.

Rev. Mr Andson seconded.

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FIELD MEETINGS.

14th June, 1902.—In the Irving Country.

The Towers of Kirtle and Bruce's Cave.

The first field meeting for the season of the Society took place on Saturday, 14th June. A party numbering a dozen proceeded to Annan, and thence drove or cycled across country by way of Stapleton and Broats to the Kirtle, which they crossed at Beltenmont; then along the highway on the east side of the river as far as Kirtlebridge, where they re-crossed and paid a visit to Bonshaw Tower, the residence of Colonel Beaufin Irving. Good weather favoured the drive, and the country presented a very fine appearance, woods and fields clad in the fresh green of a late summer and masses of hawthorn here and there adorning hedgerow and copse.

The first halt was made at Kirkpatrick-Fleming Parish Church, where a brief exploration was made of the burial-ground. Among the most interesting features which it presents is a stone set into the front of the Mossknow vault, bearing a Latin inscription to the memory of William Graham, who is designated as "Rector of this church," and who died just before the Revolution. This gentleman was one of the conforming Presbyterian clergy, who, as his title indicates, accepted institution at the hands of the bishop when the prelatic form of church government was established. He was in his own right proprietor of lands in the district, including Redhall, "Skarles," Pennersaughs, and "Blowbeoul;" and by his marriage to the daughter of David Irving of Mossknow he became first of the Grahams of that territorial designation. Another family revenge an ancient injury by an accusation written in stone. It is upon a small tombstone: "Here lyes the body of John Scot, who was murthered by the hand of Fergus Graham of Mossknow upon the 21st day of November, 1730, of age 51."

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A second vault placed against the church is that of the Irvings of Woodhouse; and another branch of the Irving family —that of Cove—which once dominated the valley of the Kirtle, is commemorated by a table stone and mural tablets. The Irvings have been planted in this district since early in the eleventh century. Mr Bruce Armstrong, in his "History of Liddesdale and the Debateable Land," says: "In Lower Eskdale, on the borders of the Debateable Land, a place called Stakeheugh on the Irving burn was occupied by a branch of the Irvings. The head of this clan resided at Bonshaw, on the Kirtle Water in Annandale, where the clan was powerful, and at one time numbered upwards of 500 men." The arms of the Irvings, bestowed upon them by Robert the Bruce, are three leaves of "the pricking bay," or holly, and the crest is a hand holding a branch with seven holly leaves. That branch is believed to be a representation of Kirtle Water, and the disposition of the leaves indicates the position of seven towers once belonging to the clan—Kirkconnel (now Springkell), Woodhouse, Cove, and Kirkpatrick on the left bank; on the right, Bonshaw and Robgill; and Stapleton detached, at a distance from the stream. The Woodhouse Irvings were a junior branch of the Bonshaw family, and from them originated the Aberdeenshire family of Irvine (as they now spell it) of Drum. It is told that Robert the Bruce, during his early struggles for the crown, was sheltered at Bonshaw, and took into his service as his secretary a younger son of the house, Sir William of Woodhouse, on whom he afterwards conferred the Forest of Drum. The Woodhouse branch was raised to the baronetage in 1809, the first baronet being Lieutenant-General Sir Paulus Aemilius Irving, who was Commander-in-Chief in the West Indies, where he did some successful fighting. The same Christian names were borne by several of his successors, who are commemorated at Kirkpatrick. The title became extinct in 1859. The clan took a prominent and valiant part in the turbulent scenes of border foray. They were for the most part fast allies of the Johnstones in their feuds with the Maxwells. After Johnstone of Annandale had made a raid on the Maxwell country (in 1585), burning Cummertrees, Duncow, and Cowhill, he found refuge in Bonshaw Tower; and here he was found by Earl Morton and a force of the Maxwell's friends, after they had burned the tower of Lochwood, "to give Dame

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Johnstone light to set her hood." Cannon were planted against the tower, but a pacification was effected through the intervention of the English Lord Scrope. The peace was not, however, of long endurance. The bloody battle of Dryfesands followed in 1593; and Edward Irving of Bonshaw and his four sons were included in the respite granted by King James VI. to Sir William Johnstone and eight score others for the slaughter of Lord Maxwell, the King's Warden, on that occasion. At an earlier date Christopher of Bonshaw and his son had fallen with the flower of Scottish chivalry at Flodden, and "Blacke Christie" of Robgill (so named, tradition says, from the colour of his armour) was one of the victims of Solway Moss. The clan took part with the Armstrongs and other families of the Debateable Land in many a raid across the Border, and they had need of strong and numerous towers to resist reprisals. A curious document of date about the middle of the sixteenth century (drawn up by an English military officer) gives the name of "heidsmen within Annerdale," with the number of "most able horsemen" that they could bring into the field; but as it was obtained by the representative of a hostile power, and probably from tainted sources, it cannot be accepted as authoritative. The following is the list of the Irvings, extending to three score and four horsemen: Cuthbert Irrewing and Watt Irrewing, xiiij horsmen; Herbert Irrewing of the Kyrk, iij horsmen; the proctour of Luce, ii horsmen; Duke Rechie, x horsmen; William Irrewing of Southwoode, x horsmen; Christie Irrewing, Mathoes sone, iij horsmen; Christei's sone of Boneschaw, v horsmen; Hebbe Irrewing of Trailtrow, iiij horsmen; Jefferay Irrewing, viij horsmen; Dawe Irrewing, vj horsmen.

Another character in which the Irvings figured was as King's-men in the struggle with the Covenanters. One of them had the equivocal honour of arresting, and so bringing to the scaffold, one of the most intrepid of the Covenanter leaders, Donald Cargill. The story is quaintly told by John Howie, with characteristic comment and addition.

Cove was the first of the ancient seats of the Irvings to be called at. It passed out of the hands of the family by sale in 1846, and is now the property of the marriage contract trustees of the Hon. Patrick Greville Nugent and his wife. There is here no remnant of the tower; but in the face of a steep cliff near to

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the mansion-house, and adjoining a particularly charming dell on the Kirtle, is a cave around which hangs an air of old romance. It is an opening in a steep wall of sandstone, some twenty-five feet from the level of the stream, and, roughly, as far from the top of the cliff, and the only access to it is by a wooden platform or bridge overhanging the precipice, at the end of a winding footpath. The cave is roughly circular in shape, its greatest diameters being 17 feet and 13 feet, and its height 6 feet 8 in. It has been protected by stout double doors or gates, for the reception of which the opening has been chiselled and the rock pierced with socket-holes. There are also four holes in the rock, which would serve purposes both of ventilation and observation, and might also be used as shot-holes in case of an enemy approaching. Within the cave is a recess in the rock that would serve the purpose of a cupboard or "aumry." On the roof and walls many initials are carved or scratched, and one is accompanied by the date 1717. Legend has associated the mysterious Druids with the early occupation of the cave. It is also said to have formed a hiding-place of Bruce. The story is that the King was in hiding at Bonshaw when an English force invaded Annandale in quest of him; but before their arrival he had been conveyed to this cave, where he was maintained in secrecy for six weeks; the English meanwhile continuing their march northward after they had knocked down a portion of Bonshaw Tower and vainly tried to burn the rest. Certainly King Robert in course of his wanderings was driven to shelter in many a place less secure and quite as comfortless as this would be; and within this nest of the rock he may have revolved the plans that were to issue in the ultimate vindication of his own rights and his country's independence. Whatever the original purpose or early history of the cave, it would readily lend itself to the arts of the smuggler, and a cottage that anciently stood athwart the pathway, with its back to the cave, would aid their efforts at concealment. The present proprietrix during a brief residence at Cove caused the following inscription, in which her own Christian name occurs, to be carved in old English letters (without any capitals) over the entrance:

> Kynge Robert Bruce from foes pursuant soughte a truce.
> Lyke my forbearers who for hymn fell
> I Ermengarde doe guard yt well.

Crossing by a footbridge the party inspected an ancient

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British grave in a coppice near the village of Irvingtown. A circular stone cairn, from 35 to 40 feet in diameter, has been raised over the grave, and from this circumstance we may conclude that it enclosed the remains of a chief or other person of consequence; but the stones have been in great part removed, and the flat stones forming the sides of grave, in the centre of the pile, are seen in position. They have probably, however, been pressed together and some removed, so that no exact measurements are obtainable, and any bones or other remains which the tomb may have contained have disappeared.

Resuming the drive, and passing the busy Cove Quarries, the party next halted near the old tower of Woodhouse, where they were met by Colonel Irving of Bonshaw, who was for the afternoon their guide, philosopher, and host. The laird of Bonshaw is a stalwart borderer, with all the old border fire, and a passion for the border land and the clan, who took part in the Abyssinian expedition under Lord Napier of Magdala, and closed an active military career as Colonel of the Manchester Regiment.

Merkland Cross was visited on the way to Bonshaw. This is a sandstone shaft, with circular floriated top formed of three fleurs-de-lys, the total height, exclusive of the base, being 9 feet 9 in. It stands a little off the public road, in a field on the Woodhouse property and adjoining the hamlet of Merkland. It is believed to mark the spot where John, Master of Maxwell, was killed in 1484.

Bonshaw Tower was the final stage of the outward journey, and here a most hospitable welcome was extended to the visitors by Colonel and Mrs Irving and their family. The old tower is in excellent preservation, and owes much to the protecting hand, intelligently directed, of the present proprietor. In close proximity to it is the mansion-house, erected, as a date stone over its south entrance indicates, in 1770. That stone also bears the initials of William Irving, the owner of the period, and his wife, Janet Douglas, a daughter of the Marquis of Queensberry. Colonel Irving has closed this door and connected the tower and mansion by a covered hall, giving access to both, and the tower is in regular occupation. Over its doorway is the pious inscription in antique lettering: "Soli Deo honor et gloria." (Honour and glory to God only.) Set into the roof of its small square porch is a stone having engraved on it the sacred monogram in Hebrew

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characters. This is known as the Crusader's stone, having, according to accepted tradition, been brought from Palestine by a member of the family who drew his sword against the infidel, and brought here after being blessed by the Pope. It is reputed to impart a blessing to all of the name of Irving who pass beneath it. The virtue is strictly limited by membership of the clan. Not much can be made of the dark ground storey, which would be the retainers' kitchen. Here, however, the visitor is able to inspect the dungeon, a grim apartment in the thickness of the broad wall; and a great stone bin, which would hold store of salted provisions in time of need, is still intact. The upper storeys are all turned to useful purpose, and are approached by the original narrow spiral stone stair, on which a stout hanging rope serves for hand-rail. The apartment occupying the first floor is the library, and it contains also a wonderful collection of curious and interesting articles, many of them connected with the family history, and some trophies from a temple at Magdala, where the Colonel led a storming party. The room, which would be the grand hall of the tower, is in perfect preservation. An arched recess in one of the walls has formed a small altar. In one of the window recesses are the stone seats from which the shot holes could be served in case of siege. The apartment overhead has been converted into a bedroom, and that forming the third floor (where the great oak beams are still intact, and joined by bolts of wood) serves the purpose of a smoking-room. The battlements command a splendid view of Lower Annandale. Over the entrance door are the holes from which, in case of an attack being pressed home, molten lead could be poured on the assailants. Colonel Irving has also restored the ramparts to the east and south of the tower, and mounted on them ship's guns, each with its pile of ball.

Mr Barbour, vice-president of the society, voiced the thanks of the members to Colonel Irving and his family for the great kindness extended to them; then, at six o'clock, a start was made for Annan, by way of Breconbeds.—*Dumfries Standard.*

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20th September, 1902.—Loch Urr.

A field meeting of the Society was held on Saturday, 20th inst., when a party numbering about twenty drove to Loch Urr with the object chiefly of inspecting an island which is commonly supposed to be a crannog or ancient lake dwelling. Proceeding by the Irongray road and Glenesslin, they made short halts at Irongray churchyard and Routan Bridge. They had also opportunities by the way of noting the progress being made with the construction of the Cairn Valley railway. On the other hand, as they ascended Glenesslin the ruins of cottages, single and in clusters, on the hill-side and by the road, bore witness to the process of rural depopulation; and the silent harvest field, where a couple of hands attended the self-binder, in place of the merry group of a past generation, indicated at once a cause and an effect of the change. Loch Urr was reached about half-past one. It is a hill lake of 125 acres (being about half the size of Lochrutton), located in a "wilderness of heath and rock," at an altitude of 625 feet. Just over the hill Carlyle had no difficulty in attaining what his friend Emerson styled "the necessity of isolation which genius feels." From the peat bog are dug large oaks and well grown birches and hazels; but now only a rare clump of trees breaks the monotony of the moor and marks the site of a lonely dwelling. Except for a few shrubs and saplings at the northern end, the shore of the loch is bare. Obviously there has been a change in the soil or climatic conditions since heavy timber flourished here. Three parishes meet at the loch—Glencairn and Dunscore in Dumfriesshire, Balmaclellan in Kirkcudbrightshire; and the farms which encircle it are Loch Urr, Craigenvey, Craigmuie, and Monybuie. There are two islands off Craigenvey shore. In the narrow channel which separates them is a slightly submerged roadway of stones, and the shoreward one, which is much the smaller of the two, has been connected with the land by a similar path. It was to the larger island that the attention of the visitors was principally directed. This is a nesting place of the black-headed gull, and in the month of May their eggs are laid upon almost every foot of its surface; but at this season the only indications of bird life are the sight of an occasional water hen on the loch and the whir of the grouse on the adjacent moors. The island is a bare oblong, roughly 150

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feet by 50, raised very little above the winter level of the water, apparently consisting, so far as its structure is exposed, of a great heap of stones, with a thin covering of earth. A little spade work sufficed to pierce the overlying deposit and lay bare the stones at a depth of eighteen inches at one point, near the margin, and about three feet at another. There is a tradition, embodied in various gazetteers, that there was "a castle" on the island, of which the remains are distinctly traceable. Certainly there are evidences of dry stone walls, but of any building with mortar there is none. These walls would seem to point to occupation of the place at a comparatively recent date, but to prepare any reliable plan of them would involve considerable labour. It is obvious also that the questions whether there has been an earlier lake dwelling, and whether that was entirely formed of stone or raised on a structure of wood piles and beams, can only be determined by excavation. It was resolved to apply to the proprietor for permission to undertake further investigation, and if this should be granted to employ a couple of workmen for a week in order to ascertain whether it would be worth while proceeding with any more elaborate scheme. Mr John Corrie of Burnbank, Moniaive, who joined the party at the loch, undertook to superintend the operations.

Mr and Mrs Hepburn, who occupy Loch Urr farm house as a shooting lodge, extended their hospitality to the visitors, and placed a boat at their disposal. Before leaving Mr Barbour, architect, tendered to them the cordial thanks of the society for their kindness.

Mr Corrie submitted the following list of rarer plants to be found at Loch Urr:—*Lobelia dortmanna* (water lobelia), *utricularia minor* (lesser bladderwort), *utricularia intermedia* (intermediate bladderwort), *scutellaria galericulata* (scull cap), *lythrum salicaria* (purple loosestrife), *carex pauciflora* (few-flowered sedge), *carex filiformis* (slender-leaved sedge), *polygonum amphibium* (amphibious polygonum), *polygonum minus* (creeping p.), *salix pentandra* (bay-leaved willow).—*Dumfries Standard.*

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LIST OF MEMBERS OF THE SOCIETY

As at February, 1905.

Life Members.

His Grace the Duke of Buccleuch and Queensberry, K.G., K.T.
Right Hon. the Earl of Mansfield, Scone Palace, Perth.
F. R. Coles, 1 Oxford Terrace, Edinburgh.
Thomas Fraser, 94 High Street, Dalbeattie.
Alex. Young Herries, Spottes, Dalbeattie.
J. J. Hope-Johnstone, Raehills, Lockerbie.
Miss M'Kie, Moat House.
Wm. J. Herries Maxwell, M.P., Munches.
Wm. D. Robinson Douglas, F.L.S., Orchardton.
Sir Mark J. M'Taggart Stewart, Bart., M.P., Southwick.
Samuel Smith, M.P., 20 Chapel Street, Liverpool.
Captain William Stewart, Shambellie.

Honorary Members.

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J. G. Baker, F.R.S., Royal Herbarium, Kew.
J. Harvie Brown, F.L.S., Larbert.
William Carruthers, F.R.S., British Museum.
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Frederick R. Coles, Edinburgh.
Dr Anstruther Davidson, Los Angeles.
Alexander M'Millan, Castle-Douglas.
Alexander D. Murray, Newcastle (former Secretary).
Dr David Sharp, F.R.S., Cambridge.
Robert Hibbert Taylor, M.D., Liverpool.
William Thomson, Kirkcudbright.
Joseph Wilson, Liverpool (former Secretary).
Geo. W. Shirley, Librarian, Ewart Public Library, Dumfries.

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Ordinary Members.

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Arnott, Samuel, Carsethorn, by Dumfries.
Atkinson, Mrs, The Ladies' Club, Dumfries.
Aitken, Miss M. Carlyle, 11 Laurieknowe, Maxwelltown.

Barbour, James, F.S.A., Scot., Architect, St. Christopher's, Dumfries.
Barbour, Robert, Belmont, Maxwelltown.
Barbour, Robert, Solicitor, Do.
Bryson, Alex., Irish Street, Dumfries.
Brown, Thos. M., Closeburn Castle, Closeburn.
Brown, Sir James Crichton, 61 Carlisle Place Mansions, Victoria Street, S.W.
Borland, John, Farmer, Auchencairn, Closeburn.
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Bell, Richard, of Castle O'er, Langholm.
Beattie, Thos., Davington, near Langholm.
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Bell, Miss, 26 Castle Street, Dumfries.

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Carmont, James, Bank Agent, Dumfries.
Cairns, Rev. J., M.A., Ivy Lodge, Albany, Dumfries.
Cormack, J. F., Solicitor, Lockerbie.
Clarke, Dr, Charlotte Street, Dumfries.
Corrie, Adam J., Malvern.
Coats, W.A., Dalskairth.
Cresswell, Wm., Teacher, Noblehill School, Dumfries.
Cresswell, Miss C. M. A., Nunholm House, Dumfries.

Davidson, James, Summerville, Maxwelltown.
Dickie, Wm., *Standard* Office, Dumfries.
Dinwiddie, W. A., Manufacturer, Buccleuch Street, Dumfries.
Dods, J. W., Sculptor, Dumfries.
Drummond, Bernard, Plumber, Dumfries.
Davidson, J., Clerk of Works, C.R.I., Dumfries.

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Duncan, J. B., of Newlands, Kirkmahoe.
Davidson, A. L., Schoolhouse, Clarencefield.
Dudgeon, C. R., Cargen.

Edgar, Harry, Ferguslea, Maxwelltown.

Fergusson, J. Gillon, The Isle, Holywood.

Gilchrist, Mrs, Linwood, Dumfries.
Grierson, John, Solicitor, Do.
Gunning, John, Minshill, Victoria Road, Maxwelltown.
Gordon, Robert, 22 Old Broad Street, London.
Gillespie, Wm., Solicitor, Castle-Douglas.
Glover, Provost, Hazeldean, Maxwelltown.

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Hannay, Miss J., Do., Do.
Hamilton, Miss, Minshill, Victoria Road, Maxwelltown.
Henderson, John, Solicitor, Dumfries.
Herries, Rt. Hon. Lord, Everingham Park, Yorkshire.
Hardy, Miss L. E., Moat House, Dumfries.
Hunter, Rev. Joseph, M.A., F.S.A., Scot., 125 Mayfield Road, Edinburgh.
Hope Bell, Thos., of Morrington, Dunscore.
Houston, John, Brownrigg, by Dumfries.
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Irving, Colonel, of Bonshaw, Annan.
Irving, John Bell, Beanlands, Annan.

Johnstone, John T., Victoria House, Moffat.
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Jamieson, Mrs, Do., Do., Do.
Jardine, D. Jardine, of Jardine Hall, Lockerbie.
Johnstone, Mrs, 4 Victoria Terrace, Dumfries.
Johnstone, W. S., Merchant, Dumfries.
Johnson-Ferguson, J. E., of Springkell, Ecclefechan.

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Kidd, Rev. Thos., U.F. Manse, Moniaive.
Kirkpatrick, Rev. R. S., The Manse, Govan.

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Leighton, Wm., Sedbergh House, Dumfries.
Laidlaw, James, Teacher, Loreburn Street School, Dumfries.
Laidlaw, John, Plasterer, Lockerbie.

Maxwell, W. J., Terregles Banks, by Dumfries.
Mounsey, Miss, 44 Drumlanrig Street, Thornhill.
Millar, F., Bank of Scotland, Annan.
Murray, Robert, George Street, Dumfries.
Murray, Mrs, Do., Do.
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Maxwell Witham, Miss Maud, Kirkconnell, by Dumfries.
Maxwell Witham, Col. J. K., D.S.O., of Kirkconnell, Dumfries.
Maxwell, Wellwood, of Kirkennan, Dalbeattie.
Malcolm, A., Priestlands, Newabbey Road, Maxwelltown.
Malcolm, Col. W. E., of Burnfoot, Langholm.
Murray, William, of Murraythwaite, Ecclefechan.
Mackenzie, W. E., of Newbie, Fawley Hall, Henley-on-Thames.
Moffat, James, Central Hotel, Annan.
Martin, Dr, Newbridge, by Dumfries.
Mann, R. G., Manager, *Courier and Herald*, Dumfries.
Maxwell, Sir Herbert, Bart., M.P., Monreith, Wigtownshire.
Maxwell, John, Tarquah, Maxwelltown.

M'Kie, John, Anchorlee, Kirkcudbright.
Macdonald, J. C. R., W.S., Dumfries.
M'Kie, Thos., F.S.A., Scot., Moat House, Dumfries.
M'Call, James, Caitloch, Moniaive.
Mackenzie, Colonel, of Auchenskeoch.
M'Lachlan, James, M.D., Lockerbie.
M'Cargo, James, Kirkpatrick-Durham, Dalbeattie.
M'Kerrow, M. H., Solicitor, Dumfries.
M'Gowan, B., Do., Do.
M'Cutcheon, Wm., B.Sc., The Academy, Dumfries.
M'Connel, Miss, Milnhead, Kirkmahoe.
M'Connel, Miss L. H., Do., Do.

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Neilson, George, LL.D., Pitlochie, 11 Annfield Terrace, Partick, Glasgow.
Neilson, J., of Mollance, Castle-Douglas.

Oven, Walter, of Torr, Auchencairn.

Phyn, C.S., Procurator-Fiscal, Dumfries.
Primrose, John, Solicitor, Do.
Proudfoot, John, Ivy House, Moffat.
Pickering, R. Y., of Conheath, by Dumfries.
Penman, A. C., Coachbuilder, Dumfries.

Ross, Dr J. Maxwell, County Buildings, Dumfries.
Reid, Frank, St. Catherine's,, Dumfries.
Rutherford, J., Jardington, by Dumfries.
Robertson, Dr J. M., Penpont.

Stark, J. G. H., Troqueer Holm, Dumfries.
Stobie, P., Cabinetmaker, Do.
Symons, John, Royal Bank, Do.
Symons, John, Solicitor, Do.
Scott-Elliot, G. F., F.L.S., F.R.G.S., of Newton, Dumfries.
Scott-Elliot, Mrs G. F., Do. Do.
Scott, Rev. J. Hay, Sanquhar.
Scott, Alexander, Solicitor, Annan.
Scott, R. A., Fairfield, Dumfries.
Sanders, Wm., Rosebank, Lockerbie.
Scott, W.S., Farmer, Redcastle, Dalbeattie.
Service, Robert, Seedsman, Maxwelltown.
Semple, Dr, Airlie, Moffat Road, Dumfries.
Stephen, Rev. W. L., St. Mary's Manse, Moffat.

Thomson, J. S., Jeweller, Dumfries.
Thomson, Wm., Solicitor, Do.
Tocher, John, Chemist, Do.
Thompson, Mrs H. A., 26 Castle Street, Dumfries.

Veitch, W. H., Factor, Hoddom.

Watson, Thos., *Standard* office, Dumfries,
Watt, Jas., Crawford Villa, Johnstone Park, Dumfries.

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Whitelaw, Jas. W., Solicitor, Dumfries.
Wilson, J. R., Solicitor, Sanquhar.
Wright, W. M., Nithsdale Temperance Hotel, Dumfries.
Wallace, Miss, Lochvale House, Lochmaben.
Wallace, M. G., Terreglestown, by Dumfries.
Waddell, Jas. B., 8 Victoria Terrace, Dumfries.
Whitelaw, Rev. H. A., U.F. Manse, Albany, Dumfries.

Yerburgh, R. A., M.P., Barwhillanty, Parton, Kirkcudbrightshire.

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Vol. XVII., Part 3.

THE TRANSACTIONS

AND

JOURNAL OF PROCEEDINGS

OF THE

DUMFRIESSHIRE AND GALLOWAY

Natural History and Antiquarian Society

FOUNDED NOVEMBER, 1862.

SESSION 1902-1903.

PRINTED AT THE STANDARD OFFICE, DUMFRIES.
1906.

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EDITORIAL NOTES.

The Editor of the "Transactions" regrets that some valuable papers, which were mislaid previous to his appointment, cannot, therefore, be published in detail. It has also been found necessary, on account of the expense involved in publishing an issue containing three years' proceedings, to omit a few papers and to condense others of considerable value.

It is the intention of the Council that the "Transactions" should appear annually in the future.

This issue forms Parts 3, 4, and 5 of Volume XVII. of the series begun on the re-establishment of the Society, and completes the volume. For the convenience of those who desire to bind the volumes, a complete index to Vol. XVII. will be found at the end of this issue.

Copies of the greater number of the issues of the "Transactions" can still be had, and will be supplied by the Treasurer, Mr M. H. M'Kerrow, solicitor, St David Street, Dumfries, who will give information regarding the prices of these.

Dumfries, January, 1906.

NOTICE TO MEMBERS.

It is hoped that Members will endeavour to add to the membership of the Society, and the Secretary will be glad to receive the names of those who wish to be proposed as members.

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CONTENTS.

SESSION 1902-3.

Page.

Annual Meeting... 237

Cinerary Urn found in Holywood—*Dr J. W. Martin* 238

A Year's Observations of the Maximum and Minimum Temperature of the Nith and its Estuary—*Rev. W. Andson* 239

Lake Dwelling and Earthworks at Loch Urr—*John Corrie* 242

Toxic Effects of Colchicums on Bees—*S. Arnott, F.R.H.S.* 246

Lochrutton Crannog, Further Excavations at—*James Barbour, F.S.A. (Scot.)* 246

Greyfriars' Monastery, Dumfries, Excavations on the Site of the—*James Lennox, F.S.A. (Scot.)* 254

Evolution, The Ideas of—*Professor Scott-Elliot* 257

Comyn, The Assassination of the Red—*E. J. Chinnock, LL.D.* ... 263

Meteorological Observations for 1902—*Rev. W. Andson* 265

Notes on the Death Rate for 1902—*Dr J. Maxwell Ross*... 271

The Sparrow Hawk—*Robert Service, M.B.O.U.* 273

Scottish Life in the 17th Century—*W. Dickie* 279

Comyn, The Death of, from Contemporary Records—*E. J. Chinnock, LL.D.* 298

Burial Mound at Bogrie—*Robert Service, M.B.O.U.* 309

Arrow Heads and Stone Whorls from Townhead of Closeburn—*Robert Service, M.B.O.U.* 309

Pre-historic Red Deer of Solway—*Robert Service, M.B.O.U.* 309

Merkland Cross—*George Irving* 310

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PROCEEDINGS AND TRANSACTIONS

OF THE

DUMFRIESSHIRE AND GALLOWAY

NATURAL HISTORY & ANTIQUARIAN SOCIETY.

SESSION 1902-3.

17th October, 1902.

ANNUAL MEETING.

Mr R. SERVICE, Vice-President, in the Chair.

The Chairman delivered an interesting address, in which he suggested means for stimulating interest in the Society, and pointed out departments of its work in which fresh research might be made.

NEW MEMBERS.—Mr Thos. Henderson, Afton Lodge, Lockerbie, and Mr Jas. Reid, Chemist, Dumfries.

Letters were read from Sir Herbert Maxwell, President, and Mr Bertram M'Gowan, Secretary, regretting that they could not continue to occupy these offices on account of other engagements. The meeting received these resignations with regret.

The following were elected Office-bearers or Ordinary Members of Council: President, Professor G. F. Scott-Elliot, M.A., F.R.G.S., F.L.S., etc.; Vice-Presidents, Rev. J. Cairns, Mr R. Murray, Mr R. Service, and Mr J. Barbour; Secretary and Treasurer, Mr J. A. Moodie; Librarians and Curators, Rev. W.

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Andson and Mr J. Lennox; Curators of Herbarium, Mr Scott-Elliot and Miss Hannay; Ordinary Members, Dr Maxwell Ross, Dr Martin, and Messrs J. S. Thomson, J. Davidson, S. Arnott, and Dr Semple, and Misses Hannay and Cresswell.

14th November, 1902.

Chairman, Mr JAMES BARBOUR, Vice-President.

NEW ORDINARY MEMBER.—Sir Herbert Maxwell, M.P.

I.—CINERARY URN FOUND AT NEWTONRIGG, HOLYWOOD, IN CAIRN VALLEY RAILWAY CUTTING, MAY, 1901.

By Dr J. W. MARTIN.

In this paper Dr Martin gave a description of a Cinerary Urn, which was found by one of the workmen engaged in the construction of the Cairn Valley Railway. He exhibited the fragments, and gave an interesting description, of which the following is a summary:—

The urn had unfortunately been shattered by a workman's pick before it was observed. It was found on a somewhat flattened-out knoll, which is level at the top and overgrown with trees, at a depth of three and a half or four feet, embedded in loose earth, with no evidence of a cist or cairn. It had the appearance of a solitary burial, the body having first been reduced to ashes. The urn was of clay, probably baked, sun dried, and not wheel made. Particles of sand were mixed with the clay, which was yellow without and black in the inside. It broke with a coarse fracture. The diameter would probably be 8¾ inches across the mouth, and the clay was five-eighths of an inch thick at the lip, narrowing as the vessel sloped inwards to a thickness of three-eighths of an inch. There was a slight bead ornament round both the top and bottom of the broad flat band which formed the top of the urn. It contained numerous small fragments of human bones, apparently those of an adult female. It was undoubtedly an example of ancient British burial, probably pre-Roman, and, of course, pagan.

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II.—A YEAR'S OBSERVATIONS OF THE MAXIMUM AND MINIMUM TEMPERATURES OF THE RIVER NITH AT DUMFRIES, AND ITS ESTUARY AT GLENCAPLE. By Rev. W. ANDSON.

(The observations at Dumfries made by Mr Andson, assisted by Mr W. Dickie and Mr Cunningham, boat-hirer; and at Glencaple by Rev. Jas. Malcolm, assisted by Capt. Hunter.)

After referring to similar observations made by him, and recorded in the "Transactions," Mr Andson explained that the present were made at the request of Mr Calderwood, Inspector of the Salmon Fisheries for Scotland, and the method adopted was in accordance with his suggestion, i.e., two self-registering thermometers were used; the one maximum and the other minimum; kept constantly in the water below the boat-house landing stage on the Nith near the New Bridge, and daily or almost daily examined. The following table was submitted, followed by the succeeding remarks:—

Tabular View of Temperatures of River Nith and its Estuary, along with that of the Air, for a year from 1st June, 1901, to 31st May, 1902.

	RIVER.					ESTUARY.			AIR.
Month.	Hig'st. °	Lowest °	Mean Max. °	Mean Min. °	Mean Tem. °	Hig'st. °	Lewest. °	Mean Temp, °	Mean. Temp. in Shade. °
Jan.	46	31·5	40	36·3	38·1	45	32	39·2	39·2
Feb.	41	31·5	35·2	33	34·5	40·5	32	34·9	34
Mar.	49	36·5	44·3	41·4	42·8	47	41·7	43	43·8
Apr.	52·8	39	47·8	42·7	45·2	53·2	41·1	44	46
May	59	43·5	52·6	47·5	50	58	47	50	47·3
June	64	46	59·4	55·1	57·2	64	53	58·2	56
July	74	57	68	64·3	66·1	71·7	59·5	65·6	64·6
Aug.	70·5	48	62·2	57·6	59·9	69	50·3	62·1	59·2
Sep.	61	50 5	57·5	53·3	55·4	60	54·5	57·2	55·8
Oct.	60	42·5	50·9	46·1	48·5	59	45	49·9	48·3
Nov.	49	32	42·7	39	40 8	47·8	38	43·1	40·8
Dec.	47	32·5	38·2	36·1	37·1	45·3	33	37·6	37
Year	74	31·5	49·9	46·3	47·8	71·7	32	48·7	47·7

If we compare the river temperature observations with those of the shade temperature of the air, which may be reckoned as that of the land, we find in one respect a great difference. I mean in the range of temperature in the two sets of observations. The range of the river observations is much more limited than

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that of the air or land. The highest temperature recorded for the river was 74 deg., on the 20th of July, and the lowest was 31.5 deg., say 32 deg. to avoid fractions, on the 10th of February, giving a range of 42 deg. for the year. In the air or land observations, on the other hand, the highest temperature was 90 deg., on the same day in July, and the lowest 6 deg., on a day in February, which would give an annual range of 84 deg. As the above values, however, were abnormal, I prefer to substitute for them a fifteen years' average of the highest single day temperatures, and a similar average of the lowest, which would alter the range to 84 deg. for the highest and 14 deg. for the lowest, and show an annual range of 70 deg. for the air, as compared with 42 deg. for the river. The mean maximum for the year being 49.9 deg., and the mean minimum 46.3 deg., the mean daily range would only be 3.6 deg. For the air the mean maximum was 54.4 deg., the mean minimum 40.5 deg., hence the mean daily range would be 14.4 deg. But now, when we compare the mean annual temperatures of air and water, we find a remarkable agreement. They almost exactly coincide. The one (air) is 47.7 deg.; the other (water) is 47.8 deg. The difference amounts to only one-tenth. I may mention that authorities on the subject lay it down as a rule that the temperatures should coincide. Thus Dr Hugh Robert Mill, in his book, entitled "The Realm of Nature," says:—"The temperature of a river in the temperate zone follows that of the land over which it flows, and it is thus subject to considerable variations between day and night." Hence the use of self-registering minimum as well as maximum thermometers to record the temperature is fitted to secure greater accuracy; and when the yearly mean, founded on such observations, is found to correspond with that of the air for the same period, it is only what might be expected, and may be regarded, indeed, as an evidence of the accuracy of the observations. This coincidence of annual means does not, however, necessarily imply a like coincidence in the monthly means. It will be seen from the table that the months in which they approximate most closely are the autumn and winter months, and those in which they diverge most are in spring partly, but still more in summer. In August, September, October, November, December, February, and April there is only a difference of a fraction of a degree, but in January, March, May,

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June, and July from 1 deg. in March to 2.7 deg. in May. There were four months in which the temperature of the air was slightly higher than that of the water, one (November) in which it was exactly the same, and seven in which the temperature of the water was highest, but only to a very limited extent, the excess and the deficiencies almost balancing one another. If now we compare the temperature of the river with that of the estuary at Glencaple, we find a different result. The annual means, instead of coinciding, show an excess of almost 1 deg. in favour of the estuary, viz., 48.7 deg. The annual mean of the river as ascertained by the observations ten years ago, was 48.5 deg., as compared with 47.8 deg. The explanation of this is very simple. The observations of the estuary having been taken always at or near high tide, and during the day, would, as a rule, be near the maximum, while those, both of the river and the air, were calculated from the combined maxima and minima of each day; and then the flow of the tide over a large extent of sand on warm, sunny weather must also necessarily have the effect of increasing the estuary temperature. It may be interesting to bring out the seasonal variations of temperature, both in the river and estuary, as compared with those of the air. Dividing the year into four seasons—winter, spring, summer, and autumn—with three months each, the following table will show the variations:—

	River Water. Mean temp. Deg.		Estuary. Mean Temp. Deg.		Air. Mean temp. Deg.	
December	37·1		37·6		37	
January	38·1	36·5	40	37·5	39·2	36 7
February	34·5		34·9		34	
March	42·8		43		43·8	
April	45·2	46	44	45·6	46	45·7
May	50		50		47·3	
June	57 2		58·2		56	
July	66·1	61·6	65·6	61·9	64·6	59·9
August	59·9		62·1		59·2	
September	55·4		57·2		55·8	
October	48·5	36·5	49·9	37·5	48·3	36·7
November	40·8		43·1		41·3	

From this table it appears that the temperatures of spring—including March, April, and May—approximate most closely those of the estuary, and the air differing only by one-tenth of a degree, viz., 45.6 deg. for the estuary and 45.7 deg. for the air, while the river has a mean of 46 deg.—the highest of the three by a

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fraction of a degree. In winter, including the months of December, January, and February, the temperature of the river and the air differ by only two-tenths of a degree, the air being highest, 36.7 deg., and the river 36.5 deg., while the estuary is 37.5 deg., about one degree higher. The greatest difference is in summer—June, July, and August—when the river and the estuary are both in excess of the air, the former by fully 1.4 deg. and the latter by 2 degrees. In autumn, again—including September, October, temperatures respectively of 48.2 deg. and 48.4 deg., while the estuary is more than two degrees higher, viz., 50.6 deg.

III.—THE LOCH URR CRANNOG. By Mr JOHN CORRIE.

Loch Urr, or Loch Orr as it is often called, is a small hill lake on the boundary between Dumfriesshire and Kirkcudbrightshire. According to the O.S. map, it is 623.9 feet above sea level. Its area is 137.765 acres, of which 33.741 is in Balmaclellan, Kirkcudbrightshire; 33.125 in Glencairn, Dumfriesshire; and 50.899 in Dunscore, Dumfriesshire. The place which Loch Urr fills in history is not large. Chalmers, in his "Caledonia" (page 217, vol. iii.), lays Symson's MS. account of Galloway (1684) under contribution as follows:—

"Loch Urr, which has a circumference of three miles, lies partly in Dumfriesshire and partly in Kirkcudbrightshire. Symson says it is replenished with pike and salmon. It has two islets; on one of these there is an old castle with plantations of willows; and here wild geese and other wild fowl breed. From the eastern bank there is an artificial road leading into the castle isle; this causeway is now about knee-deep under water." The "Old Statistical Account" says:—"Small island with remains of stone walls." Fullarton's Gazetteer of Scotland (1844) introduces matter of a more controversial character. At page 789, vol. ii., we read:—"Loch Urr seems to be the Loch-cure of Camden, from which he erroneously represents the Nith as issuing, and which he states to have been the site of a town of the Selgovæ, called by the Romans Corda. The islet may possibly have borne on its bosom some Selgovæ huts; and it certainly was the site, at a later date, of an important though unstoried castle. Some ruins which remain show the fortalice to have had great strength of wall and a variety of apartments."

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Dr Munro's "Ancient Scotch Lake-Dwellings" contains no description of Loch Urr. It finds a place, however, in that writer's tabular list of lake-dwellings, where it is included in Class 2—"Constructed of stone, earth, etc." It would thus appear that the island in Loch Urr has long been recognised as a place of early human habitation, and it is in no way surprising that the attention of the society should have been directed to it as a fitting subject of investigation. With the permission of the proprietor, excavations were made.

The work of excavation was almost entirely confined to the larger island. The entire island is covered with a considerable surface deposit, consisting of decayed, or partially decayed, vegetable matter. This deposit was found to vary greatly in depth; in some places it was as much as two feet three inches; in others not more than nine inches. The sub-soil could not be penetrated to any depth owing to the presence of water. The surface material was removed with the utmost care, exposing the walls of the various enclosures to the foundation. All the walls gave evidence of care in construction. No trace of mortar was visible, and it is improbable that any mortar was used. The amount of debris found at the base of the walls or in the neighbourhood was not large, a fact which seems to justify the inference that the walls were not carried to any great height, probably not more than three feet at the most. The height of the portions at present standing is about two feet, and the thickness, which is nearly uniform throughout, is two feet three inches. The outer wall, which encircles the main island, although built of dry stone in much the same manner as the inner enclosures, has evidently been of a more important character altogether. The height has been greater, the thickness in some places is as much as six feet, and, near to what seems to have been the entrance, additional stonework in the form of rude buttresses are found. This wall seems to have been undermined, and to have then fallen outward. Hence the large quantities of stone found around the margin.

The remains at Loch Urr then consist of:—(1) A gangway of stone, 114 feet in length, entirely submerged, and affording a secret means of communication with the island from the shore; (2) a small island, 66 feet in length and 33 feet in breadth, on the line of the gangway; (3) a second gangway of stone, 56 feet in

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length, and partially submerged, communicating with the main island; (4) the main island, with ruins of outer wall and four inner enclosures.

We come now to speak of the earthwork. If the O.S. map is referred to it will be seen that a point of land, bearing the significant name "White Isle," juts out from the Dunscore side of the loch and forms a peninsula some six acres or thereby in extent. This portion of ground takes a somewhat conical form, and it is upon the neck of land which connects this knoll with the mainland that the earthwork is found.

It consists of a well-defined rampart and ditch, and appears to have been a work of some importance. The length of the rampart may be stated approximately at 500 feet. On the west side, where the rampart is most entire, it rises above the present ground level of the trench in front to a height of between eleven and twelve feet. At the rear the height is about four feet. Two sections were cut here; one through the rampart itself; another through the ditch in front. The rampart was found to be composed of a stiff white clay, mixed with rough gravel. This overlies the original soil to a depth of six feet six inches, measuring from the centre of the rampart. No stone larger than coarse gravel was found here; but it may be mentioned that stones show through the surface at two points on the face of the rampart, and at one at least of these points the stones have evidently been arranged so as to overlap one another. I observe from the copy of the "Transactions" lately placed in my hands that Mr Barbour refers to a similar arrangement as occurring at Birrenswark. In the rear of the rampart a rough stone pavement ten feet in width was found. As this pavement lies near the surface, it has the effect of altering the character of the vegetation, and the pavement can be traced in this way along the greater part of the line of rampart. It should be mentioned that a wide gap of between eighty and ninety feet occurs almost in the centre of the earthwork. It seems probable that this portion has been broken down, but at present I have no proof to offer in support of this suggestion. The trench in front of the rampart was found to be silted up to a depth of five feet ten inches. This fact is important, for it proves, almost conclusively, that the point of land which we now know as a peninsula was at one time an island. The name "White Isle,"

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which still lingers, seems to be reminiscent of such a period. That an intimate connection, for purposes of defence, existed between the earthwork and the lake-dwelling can scarcely be doubted. The two are little more than 300 yards distant from each other, and we know that fortifications on land adjacent to lake-dwellings are a more or less constant feature of such remains elsewhere.

Such are the details of the investigations at Loch Urr. I am afraid the results, so far at least as relics are concerned, are somewhat disappointing. No relics were found at the earthwork. In lieu thereof I submit two samples of earth which may prove of interest to the members [showing the white deposit of clay and gravel over the black earth]. The relics found during the excavations on the island are as follows: 1, a flint flake; 2, fragment of clay pottery; 3, fragment of red pottery; 4, other small fragments of pottery; 5 and 6, two round stone balls.

Through the kindness of Mr Barbour, all the specimens were submitted to Dr Anderson. He reports that No. 1 shows slight signs of use. That No. 3, the lip piece of pottery, showing indications of having been made on the wheel, may be of Roman times or later. Nos. 5 and 6 he pronounces "natural."

Is it possible with such slender data to form an opinion as to the period to which the lake-dwelling at Loch Urr belongs? I am afraid not. Dr Anderson's report favours the view that it is post-Roman, and that is, perhaps, as far as we can go with safety. That the Loch Urr lake-dwelling does not possess the characteristic features of the crannog proper goes without saying. I am disposed to favour the view that it is a natural island artificially strengthened, but Mr Barbour sagely reminds me that our early forefathers did not mind hard work, and it is perfectly possible that the main island, like the gangways, and in all probability the small island also, are the work of man.

I would only add that the thanks of the Society are due to Mr William Kennedy Moffat of Craigenvey and Shillingland for his kindness in sanctioning the excavations; to Mr Hepburn, Liverpool, for the use of his boat; and to the Rev. T. Kidd, Moniaive, for the photographs which accompany the report.

Mr Barbour remarked that the presence of the stone

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buildings and the earthwork gave to the crannog a character different from any which had yet been described.

19th December, 1902.

Chairman—Mr ROBERT MURRAY, Vice-President.

I.—THE TOXIC EFFECTS OF COLCHICUMS ON BEES. By Mr SAMUEL ARNOTT, Carsethorn.

In this short paper the author gave the results of a series of observations upon the toxic effect produced upon bees frequenting colchicums in search of honey or pollen. The bees became stupefied and died.

II.—ACCOUNT OF EXCAVATIONS AT LOCHRUTTON LAKE-DWELLING. By Mr JAMES BARBOUR, F.S.A. (Scot.).

In a former communication (on page 128) to the Society on this subject I had the privilege of submitting a report describing the exploratory works then overtaken on the island, and the results, and the main inferences, it will be remembered, drawn from the facts disclosed, were:—(1) That the structural characteristics of the island are those of an epoch when the craft of carpentry had made some advance, and sharp-edged iron tools, such as the axe, chisel, and boring instruments, had come into use; and (2) that the island served as a place of human habitation and there had been a mediæval occupation of considerable opulence and prolonged duration.

I shall proceed first with the further description of

THE STRUCTURE OF THE ISLAND,

and shall most easily and intelligibly explain the details by reference to the accompanying plan, which, unfortunately, owing to the interruption of its preparation by the flooding of the floor, is incomplete. It does not show all the timbers exposed, but only so much of the work as was actually surveyed. Four trenches, marked A, B, C, and D, cut from the centre of the island to the outer margin, exposed the floor, which consists of logs of wood laid side by side, forming the pavement, and doubtless the parts

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not exposed correspond. The pavement is more or less decayed, but few of the timbers are wanting. The most perfect part lies towards the north side of the island, and is partly detailed on the plan. It is regular, close jointed, and even, and comparatively sound.

The disposition of the timbers is peculiar. They are arranged in groups, lying in different directions, and the pieces are sometimes assorted in equal lengths as if prepared beforehand to go together. In the case of a forked piece a filler is inserted. The axe has been used to cut the pieces to the lengths required.

Another detail presents itself. A thin bed of stones is found between the log pavement and the layer of logs below it. The purpose the stones were meant to serve seems to be to fill up the inequalities of the lower layer and raise the smaller timbers of the pavement itself in order to secure a straight upper surface. Remaining inequalities were then reduced by the use of the axe. The swelled lower end of a large trunk 18 inches in diameter, for instance, was observed to be reduced to the general level in this way, and other timbers exhibit marks of similar treatment.

At the point marked E on the plan a flat stone was exposed, not large, but with others seemingly displaced, sufficient to form a hearth, and that such was its purpose, I think the presence of considerable quantities of charcoal proved. The hearth lay almost immediately over the log pavement.

Remains of super-imposed works near the north margin of the island are shown on the plan. One of these consists of two parallel oak logs, 9 to 10 feet in length, 11 inches by 6 in section, and 8 feet apart, overlying the floor. The logs are squared by means of an axe. Each exhibits three mortice-holes on the upper side, and pinholes passing through them at right angles; and fragments of two upright tenoned pieces measuring 6 inches by 5 on the section, reduced on the tenon to 5 inches by 5, and holed for the reception of the pins, were still in position. The logs were fixed in position by pins of oak driven into the floor.

A squared oak block 10½ inches by 8, and 4 feet 2 inches in length, rebated at the ends and grooved in the middle, described in the former Paper, and exhibited, lay about 10 feet south of, and at right angles with, the logs just described.

Another observable feature consists of a double line of logs, forming a raised ledge 8 inches high and 18 inches wide (H H).

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It starts from the margin of the crannogs at a point about north-east, runs nearly westwards, and then southwards, dividing the area unequally. It does not cross the space between the morticed logs before described, but is found on either side of it. There are indications of a characteristic gateway, about 3 feet 6 inches wide, flanked by a return of the ledge, and with a group of five stout posts in front.

THE RELICS

Of the vestiges of occupation recovered during this year's operations very few were got from the trenches. Fortunately the refuse-bed was discovered, and from it were exhumed nearly all the objects to be described, those mentioned in the First Paper excepted.

Several oak posts driven into the floor of the structure project above the surface of the pavement, 8 inches or more. Four in the west section, at K, form apparently part of two rows, 19 feet and 27 feet respectively, from the south exterior margin of the island; in the south section, at L, three posts stand in a row, 11 feet from the margin, and another, at M, is 30 feet from the same point. Their purpose is uncertain.

A fragment of a morticed oak beam, corresponding with one represented at page 74 of Dr Munro's "Ancient Scottish Lake-Dwellings," fig. 36, was recovered, but not *in situ*.

Notwithstanding the partial description contained in the former Paper, I will, in order to avoid confusion, set out here the whole group, under different heads.

OBJECTS OF STONE.

Fragments of a circular vessel of red sandstone with level bottom and expanding sides, 1½ inch thick, smooth inside, and neatly dressed with a point outside.

A circular hammer, and a circular disc, neither of them characteristic.

ARTICLES OF WOOD.

These consist of three shaped pieces of oak, for what purpose intended is not evident.

METAL OBJECTS.

An iron axe head. It is much corroded and broken, measures about 3½ inches across the cutting edge, and 8½ inches

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in length over all. There is no hammer, and the handle-socket, which stops with a blind end, projects from the side of the blade.

An iron spear head 8½ inches long and 1 inch across the broadest part of the blade. It is furnished with a socket, and the blade is marked with a central ridge.

A fragment of an iron knife blade, 1¼ inch broad, curving inwards, the edge returning at the point with a curve to the back of the blade.

Several nails and nondescript pieces of iron.

A bronze or brass pot foot, 2 inches long, and 1 inch broad, having projecting central bead and turned out end.

A bronze ring ⅝ inch diameter, made of hoop, ¼ inch by 3-16, bent round so as to meet at the ends.

Several small pieces of sheet lead of different thickness.

An oval disc of lead, 1 3-16 inch by 1 inch, the thickness barely 1-16 inch.

Five leaden spindle whorls, 1 inch to 1 1-8 inch in diameter, about 1-8 inch thick, the holes 5-16 inch wide.

MISCELLANEOUS OBJECTS.

A small equal armed jet cross, personal ornament, described in former Paper.

A glass bead of sixteen sides, and holed.

A piece of bone or horn, shaped like a pin.

A shaped piece of horn.

A leather sole of a female's shoe. It measures 9⅞ inches in length, the breadth is 1⅞ inch at the heel, 1⅛ inch at the hollow of the foot, 2⅞ inches at the widest part, and the toe is sharp at the point.

The toe part of a male person's foot-dress, broad and round, made of half tanned skin.

POTTERY.

This article, which I am assured is both ancient and interesting, again bulks largely. It is difficult to convey a just idea of the quantity recovered. When I say there are about 600 fragments, it is necessary to explain that the pieces are very small, measuring from ½ inch to five or six inches across. That a large number of vessels are represented is obvious from the difference of the ware, shape, colour, and style of ornamentation. In one respect there is uniformity—all the fragments present the peculiar

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glaze believed to be characteristic of the work of mediæval manufacture. As the general description of the pottery contained in the former Paper applies to the whole, it need not be repeated, but something may be added by way of setting out more fully the different styles of the ornamentation.

The pottery is so fragmentary that in most instances the designs are incomplete. It exhibits ornamentation either incised or in relief, or both, but colour decoration is absent. Of incised designs the most simple consists of thumb marks, usually found round the bottom of the larger vessels.

A number of pieces of ware, ¼ inch thick, red inside, and finished outside with a yellowish brown glaze, representing one or more vessels of a form contracting in the middle and expanding above and below, are enriched nearly all over with a kind of herring bone or fern-like ornament, scratched into the soft clay.

A fragment of fine hard ware, ¼ inch thick, bluish in the fracture, grey inside and glazed outside a greenish brown colour, part of a large vessel, is marked with incised ornament, consisting of a pair of vertical lines and short sloping strokes on either side, forming together a broad fern-like design.

A piece of ware, enriched with an incised undulating line.

Several pieces of fine ware, black inside, and glazed outside bluish green, are enriched with vertical ribs in relief, laid on in slip, and between them with incised lines half an inch apart, in horizontal or more or less sloping directions.

Fragments of hard ware, black inside and green glazed outside, enriched in relief with vertical rope-like ornament, terminating with tasselled ends.

Several pieces of ware, red inside, glazed green outside, decorated with a net-like pattern in relief, having knots at the intersections of the lines, all laid on in slip. The design is imperfect, but it has evidently been elaborate. The vessel was probably square or octagonal shaped, as the pieces show scarcely any curvature.

A piece of thin ware, bluish grey inside, and of a brownish colour outside, and glazed, shows a vertical ornament in relief crossing with a knot, a horizontal line in relief, and terminating in a ball pendant. There is only a fragment of this design.

The handles of vessels, of which there are upwards of forty, are moulded or otherwise ornamented. One is marked longitudi-

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nally with four sharply incised lines; another is rope-like, and at its junction with the vessel the shoulder is fluted.

FOOD REFUSE.

A large addition has been made to the food refuse, consisting of animals' teeth, including 6 boars' tusks, and a considerable quantity of bones, nearly all of them broken, presumably in order to extract the marrow. These were submitted to Dr Thomas H. Bryce, Queen Margaret College, University of Glasgow, for identification, and the following is his report:—

REPORT ON BONES FROM LOCHRUTTON CRANNOG.

The bones forwarded to me for identification by James Barbour, Esq., from Lochrutton Crannog are, unfortunately, in a very fragmentary condition. The majority are bones of cattle, but of which species it is impossible to say in the absence of any sufficiently distinctive parts. The other animals are represented by a smaller number of parts, as noted below:—

1. Ox (Bos ?) teeth and fragments of various bones.
2. Sheep (Ovis aries, variety domestica), various bones.
3. Pig (Sus scrofa domestica), incisor tooth and canine of a boar.
4. Red deer (Cervus elaphus), metacarpus and various fragments.
5. Roe deer (Carpreolus caprea), portion of a single cannon bone.
6. Horse (Equus caballus), two molar teeth and one metacarpal bone.
7. Fish (?), fragment of a single vertebra.

In answer to inquiries regarding some of the points mentioned in the report, Dr Bryce furnishes the following Note to Report on Animal Bones found at Lochrutton Crannog:—

In regard to the bones of the domestic animals of the above list, it may be interesting to note that they do not correspond to those of the modern breeds. In the absence of the distinctive horn-cores of the Celtic Shorthorn (Bos longifrons) it is not possible to identify the ox bones with certainty as belonging to that ancient variety of small ox, but such bones as exist correspond in size to those in my possession, which certainly belonged to Bos longifrons.

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The sheep bones must be attributed to the ancient slender legged sheep, and not to any of the modern breeds.

The horse represented was a small animal of about 10½ to 11 hands. The only long bone of the limbs present is a metacarpal, which is not broken, and in the absence of any of the other bones broken like the ox bones, it is not possible to say whether the horse like the ox had been used for food.

I have now recorded the facts disclosed by the explorations, and they are respectfully submitted to the judgment of antiquaries competent in such matters. Having seen and as it were handled the facts, however, it may be useful to indicate the impressions I have formed of them.

THE STRUCTURE.

Referring to the super-imposed works, I would suggest that the raised stage, H.H., may be the basal part of a dividing structure separating the area into two unequal courts, the opening J in it being the gate or entrance to the more important division. The group of morticed beams or sleepers, F and G, and tenoned uprights, bisecting the dividing structure, is evidently, I think, remains of a wooden house, it may be a guard-room, tower, or dwelling, the length probably 20 feet, partitioned into two apartments.

The bed of stones covering the log pavement is a peculiarity. It seems to have been about 3 feet in depth. The breakwater of stones surrounding the island is also a notable feature.

If we compare this island with other Scottish crannogs investigated, it is found that it coincides, generally at least, as regards the constructive principles. The author of "Ancient Scottish Lake-Dwellings" indicates two prominent characterising features of such structures, viz., (1) upright piles in the form of one or more circles, and (2) the remains of flat beams containing large square cut holes at their extremities.

In this instance the first of these features has not been observed, although originally it may have existed. Of the second, the remains are meagre, but sufficient, I think, to prove conformity. And there are other evidences of agreement, such as the use of wood logs as the main element in the construction, the peculiar disposition of the logs in groups, the

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levellings of stones between the layers of wood, and the use by the builders of sharp-edged iron tools.

The structure thus furnishes evidence from which to infer comparatively its chronological position. Being of the common type, it may be conjectured to have emerged during the crannog-building epoch in Scotland, which, according to Dr Munro, corresponds to the age of anarchy consequent on the withdrawal of the Roman soldiers from Britain. The strengthening and heightening of the island with stones, as previously described, was, however, there is reason to conclude, work subsequently overtaken, and it would appear at a time when the forests had given out, or the ancient art of crannog-building was lost.

It may also be conjectured that there had been two occupations. The floor of the original occupation was the log pavement; that of the later occupation was the bed of stones overlying the wood.

THE RELICS

furnish abundant evidence of the occupation of the island as a place of human habitation. That vestiges distinctive of the original occupation could hardly be expected to survive, considering the vicissitudes which seem to have attended the history of the island, may well be allowed, and while the food remains correspond with what is usually found on crannogs and other ancient sites of habitation, I do not know that any of it can with certainty be differentiated as belonging to the one settlement or the other. The pottery, the remains of the shoes, the cross, and the bead, are all, I am advised, characteristic of mediæval times.

I may now summarise in a word the leading characteristics of this crannog and its products as compared with results obtained on other investigated sites of the class. (1) The original structure itself, although now deficient in the completeness of some of the usual features, essentially follows the common plan; (2) the strengthening and heightening of the crannog after subsidence with stones is, I think, an unusual circumstance; (3) the remains of the basal portion of a superstructure are well represented in this instance; (4) the food refuse here corresponds with what is found on other such sites; (5) whether arising from a meagre original occupation, or the obliteration of the products of it by the later works, there is in this case very little trace of articles characteristic of the earlier civilisation obtained on other

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corresponding structures; (6) on the other hand, mediæval pottery and other objects of like character found very sparingly on similar sites constitute the special and most interesting feature which differentiates the Lake-Dwelling of Lochrutton.

It must be evident that the civilisation represented is not without marks of culture and refinement. Domestic animals were reared for food, such as the ox, sheep, and pig. These were supplemented with red deer, roe deer, and fish; and the pony, perhaps, in stress of circumstances, was not rejected for the table. Then the high-class pottery is a marvel to be found in use in such a place, and seems to show the urgency of circumstances compelling the retreat. Men with broad feet were there, who might handle the axe and spear, and the lady of the slender foot, wearing a little Greek cross inscribed with the sacred monogram, and supported probably by a string of sixteen-sided beads. Nor were the ladies idle. Five spindle whorls at last found their way to the refuse bed. The presence of ladies and their peaceful occupation predominates. A single spear is the only evidence suggestive of war.

III.—EXCAVATIONS ON THE SITE OF THE MONASTERY OF DUMFRIES. (Summer, 1901.)

By Mr JAMES LENNOX, F.S.A. (Scot.).

Owing to building alterations in 9, 11, 13, and 15 Castle Street, it became necessary to take down eight buildings and to excavate the ground to the extent of nine feet deep for the formation of a cellar and warehouses above same.

The back portion was known to cover part of the site of the monastery buildings, so that on taking down the old buildings it was discovered that these had been built out of the remains of the still older building, the monastery, many of these were wrought stones. Some of these are described further on.

The excavations revealed a great number of human bones, some of which had been disturbed when the buildings, now removed, had been erected, as in one part these lay heaped together. The majority were as they had been deposited in mother earth, and in no case was there remains of wood, except one, in which was the body of a child, and this was much more recent than any of the other interments.

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We found no buildings or human remains north of Nos. 2 and 6 on plan, but in every other part there were a great number of skeletons.

On going down from three to four feet we came on a rectangular foundation, 9 ft. 2 in. long by 3 ft. 5 in. broad, stretching N. to S. It consisted of well set foundations, with a few of what had formed a running course of hewn stones, as marked No. 1 on plan. These were 5 inches deep, with a facing slope of 3 inches and a straight face of 2½ inches. This was quite detached from any other foundation, and just where we were told to expect the altar stones to the east of this, 9 feet distant, was the foundations of a wall of the same kind of sandstone as the one discovered.

These foundations were not quite continuous, as here and there they had been broken into for drainage purposes for the buildings just removed.

These are marked red on plan, and show a measurement of 45 feet north to south, with walls running west from them in the direction of Greyfriars' Street. The excavators could not fix the length of these, as the operations did not include the houses in Greyfriars' Street, but it is known that the roadway in that street stands on old vaults, and that the houses in both Greyfriars' and St David Streets did at one time form part of the buildings.

At the altar we found nine skeletons, with their heads against it and their feet to the east, and according to the custom of the period, probably ecclesiastics. On the south we found only two. These had their heads to the west and feet to the east. On the north and west there were no interments at the altar.

All the skeletons had fine sets of teeth, the wisdom ones being well developed, and in no case did we see any decay. The only other bones we could handle were the larger leg ones; the others, if they were visible, crumbled when exposed to the air.

South of the altar we came on traces of the earth having been disturbed at a much lower level than at any other point, and on digging down we found at the depth of nine feet from the surface a culvert of flat sandstones with a channel six inches broad, and three deep, covered with sandstone flags. On

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following this up it proved to be a drain or culvert leading from the old well, also marked red on plan, to where it entered the property of Mr Haining, where at one time stood the Grey Horse Inn, where the convent kitchen fireplace used to be shown in our memory. This duct had clear water running in it when we opened it up.

On cutting a tunnel between two cellars we came on a heavy piece of masonry, also marked on plan, being an old wall of 4½ feet broad and only supporting a 9 inch wall.

Owing to the fact that there were no inscriptions found, it is impossible to state whose the skeletons were, but, as is shown by historical references, the two found to the south of the altar were probably the Red Comyn and his uncle.

The best of the stones discovered were the font, which had been broken into three, and used in the building now removed. It measured when set up 21 inches across the lip and 13 inches in diameter; inside the lip this stone was 18½ inches deep.

We also found a small procæneum, 6 inches by 4½ inches inside measure; also a mullion of a window, showing good workmanship; and several rebates for windows or doors. There had been a small pilaster at one of the angles, with a diameter of 2½ inches. In one case this pilaster entered a right angle, showing the lentil of a door or window.

All hewn stones had mason's marks on them, as is the custom in ancient church remains.

Behind the back wall of the church were numerous skeletons. These were found when the street was paved nearly as far as the Burns Statue, where a wall runs from near to Messrs Low & Johnstone's shop, so that the graveyard had extended thus far east of the church, and after passing this wall no human remains were found towards St Andrew Street.

After quotations from John of Fordun and other ancient writers, supporting the conclusions at which he had arrived, Mr Lennox proceeded:—

The record of John of Fordun that the friars laid Comyn behind the altar is borne out by the discovery that the altar was nine feet from the back wall of the church. The only definite facts we have established by these excavations are these:—We have fixed the site of the altar and the breadth of the choir.

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16th January, 1903.

Chairman—The PRESIDENT.

NEW MEMBER.—Mr J. R. Thompson, chemist, Dumfries.

I.—THE IDEA OF EVOLUTION, AND POSSIBLE FIELDS OF WORK FOR BRITISH BOTANISTS.

By Professor G. F. SCOTT-ELLIOT, F.L.S., F.R.G.S., etc., being his presidential address.

Professor Scott-Elliot said it seemed that the most interesting subject one could take would be that of evolution. If they took it in the right spirit, these wider ideas of science gave you a clue by which you can find your way through all minor departments. Such a science as botany, for instance, was generally divided up into little abstract sciences in which workers are without sympathy, in fact generally did not understand what their neighbours in the other compartments were doing; but with a proper idea of evolution, you could bring the whole of these workers into one continuous scheme. The general course of the subject of evolution was most easily shown by a very simple diagram. It advanced in a series of waves, followed by a dip. The first tidal wave was the work of Charles Darwin, which swept away all the accumulated rubbish of the middle ages, and left the ground clear for future workers. Darwin might be considered as the accumulation of a whole series of other people. Next came the sinking portion—the trough of the wave, chiefly due to theological and metaphisical objections—not strictly scientific at all—which sprang from a total misconception of Darwin's position. It was the cruelty, the barbarism of rooting out the unfit, which shocked the easy-going people of 1860; but by a curious confusion of ideas they blamed Darwin for the fact that he pointed out. Darwin was not responsible for the cruelty; he only pointed out the fact that it existed. Of course there was no foolish sentimentality about Nature, and there should not be any in business of any sort. But one of the fatal defects in this world was that for anything dear and precious you had to pay heavily. You could not get over that unfortunate arrangement of the world however you tried to do so. The next point was what was wrapped up in

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what Darwin gave, and might he put down as harmony with environment. Every plant and every animal living to-day was adjusted more or less exactly to its conditions at that particular place and in that particular era. If they examined the commonest plant and looked at the shapes of the leaves, the teeth, and hairs on leaves, and then studied the conditions in which you found them growing, you would find that every one of these minute details were of real importance to its life. It was on these little adaptations by which the plant or animal came into the most perfect harmony with all the needs of its special atmosphere that he thought a great prospect lay for British botanists. Good books had been published on the subject by Sir John Lubbock and Kerner, and others; but so far he found in this country that people will not take up these interesting and important subjects, but preferred to spend their time on purely systematic work. The study of plants which were avoided or preferred by animals was a very important one, and we know nothing about it. Again, we do not understand much with regard to the scattering of fruit and seed, and a whole infinitude of subjects are not studied at all. The next development is of the nature of a denial. The inheritance of acquired characters was denied by Dr Weissmann, a German, who, however, brought forward no evidence except his opinion that it could not be true, because it interfered with his theory of heredity. That was scarcely scientific reasoning, and it was soon pointed out that if you denied the fact that a character acquired in life could be inherited it led you into very curious positions. For example, dipsomania could certainly be acquired, but according to Weissmann it could not be inherited. That criticism was got over, and with very great advantage to science, but its effect had been unfortunate, as it prevented a great many people from following up what seemed to be a very valuable field of inquiry. The next point was the struggle for life within the body of the plant or animal. Such an organ as one's hand or the foot of a horse was composed of an infinite number of little living particles. It had been pointed out by the German botanist, Rolfe, that these living cells or particles were competing for food with one another, so that if you used your thumb, and if the same amount of blood was passing into your hand, the excessive use of the thumb would dwarf the little finger or

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whatever was not used. In that way they could explain a great many important points which were difficult to understand. For instance, one toe of the horse was developed enormously, and the other four toes which were not used had become starved and disappeared, because all the nourishment went into that one toe. That was a very important variation, and one that had never received in this country all the attention it deserved. It showed you at once how useless things would disappear, and it was also important for this reason that it brought clearly out the resemblance between the animal or plant's body, and the whole mass of individuals that made up a plant species. The disappearance of what was useless in the body of the plant was thus exactly similar to the disappearance of a useful species. The next point was one of those curious drawbacks or objections that constantly came up as if they were a sort of rebellion against the calm progress of scientific inquiry. That was the hybrid idea. People began to remark that hybridising gave a simpler explanation of evolution than those Darwinian ideas. That was all very well, but supposing they crossed two species then each species was tuned to the special conditions of the place in which it lived. The product hybrid of these two species would possibly be in harmony with the environment, and as a matter of fact hybrids, though common enough—for instance, the willows and others in this country were chiefly hybrid—did not seem able to breed and hold their own ground in the way that ordinary species did. Again, it had been recently shown that there was a curious tendency amongst hybrids to turn back either to one or to the other ancestral form. According to Mendel's law in the case of one dominant character, one-fourth would be the weaker character pure, one-fourth would be the stronger character pure, and one-half would be mixed with both strains in the blood. Here again was a vast opportunity for those who were interested in experimental work of that sort. The fourth great advance was associated with the names of Galton, Pearson, and others. This was the study of variation of the normal variation in one species. This was a mode or fashionable number or length for every character in a species, but abnormal individuals were exceedingly common. A very curious case was that of the 7-leaved clover, which was artificially produced by De Vries, who found plants of clover

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with frequently four and five leaflets. He grew plants from the seeds of those, and gradually, by selecting those with the greatest number of leaflets, he obtained plants in which there were 29 per cent. of the leaves with seven leaflets. Clover with seven leaflets had never been seen by anybody, and in all probability it had never extended to the world at all. And if this botanist could produce a seven-leaved clover in this way in the course of a few years, he saw no reason that Nature should not be able to produce anything in the plant world in the course of a few centuries. Then there was the usual backward trend again, the usual trough of the wave following after Galton's and Pearson's discoveries, and that was an appeal to garden sports and variations. Everybody who had been at all observant in the fields or in gardens must have noticed a tendency for extraordinary and peculiar forms to develop apparently without any reason at all. These sports or bud variations were carefully examined by Dr Bateson and others, and the theory which Bateson was most inclined to follow was that evolution, instead of following in this gradual way, step by step and line by line, had come about by a series of sudden leaps or jumps. The question was more important from every point of view than it looked, because it came to be—Was progress due to a struggle for existence under evil circumstances and bad conditions, or were these great advances due to overfeeding? These bud variations were due to too much food and nourishment, whereas the small minor variations such as we found in such a case as this were due to the natural hard lines in which every plant found itself. The point he thought most conclusive of this question was this:—In any museum they would find instances of sheep with a supernumerary eye in the middle of the forehead or an extra leg tacked on somewhere on the middle of the back. They found cattle occasionally with two heads, and also in plants they found continual instances in which all the stamens and pistils had become petals. Could one suppose that things of that sort could ever produce an offspring, vigorous and efficient enough to overcome the difficulties of ordinary outside existence? He thought not. And, besides, if they looked to the general behaviour of the different wild species in this country they could see not what they should expect on this theory of sports, but exactly the condition which ought to come about if

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the species were developed little by little and line by line. They found some plants quite distinct, recognisable everywhere. Others again could only be recognised by a good botanist; and then there were plants like the hawk-weeds, the brambles, and the roses that could only be recognised by one or, at the utmost, three people living, and those three people, from his own personal experience, very frequently gave quite different names to the specimen in question. Occasionally he had known cases in which specimens of the same bramble from the same bush were named differently by the same specialist in two succeeding years. All that led to the view that the formation of species had been in this gradual slow and cumulative manner. So far he had given them the average general doctrine on that question. The next stage was predestination—a very good old Scottish expression, and which was the only one he could think of to account for a good many facts that were otherwise inexplicable. If they took the development of the plant, the gradual building up of its complex body from the simple egg cell, they would see that every step from the egg cell upwards followed directly upon the previous step. They could not really imagine any change in the regular sequence of development unless there was a change in the circumstances or environment. It seemed that the truth was very much of the same nature as the truth of Newton's first law of motion—that an object would persist in its state of rest or uniform motion in a straight line so long as it was not induced by circumstances to change that motion. He thought the development of the plant was of the same ordinary continuous manner. Each step depended upon the previous one, and unless environment altered it, the sequence would be the same and lead to the same result. But not merely so, any change in the conditions and the surroundings, however slight, would affect that development and alter that development. Thus by these slow changes in the environment—most of which were utterly beyond the power of any instrument devised by mankind to record—we had a differentiation which had produced a complex mixture of characters which we called a species or plant. He would go so far as to say from his own experience of botany and plant life generally, that one found a very curious and a very striking resemblance between the laws concerning the individual—a single plant or animal body—

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and the laws concerning a species or collection of individuals, and even beyond that a similar resemblance in the laws which governed associations or communities of species, such as, for instance, a wood or marsh or grass meadow. In a wood you found a number of different species living together in such a way that while each individual had its own existence, yet its existence was governed by the welfare of the whole wood. Also in a species we found something of the same sort, and again in cells of the body of a plant or animal. The existence of each cell was independent in itself, but it was governed by the act of the whole organisation. He thought, looking at things in that manner, that one gradually perceived the definite scientific reason for a great many points that were generally left outside the field of scientific inquiry. We found in nature one form of vegetation competing with another. The place where they were now had been at one time probably covered by coniferous or geological vegetation of some sort. After the retreat of the ice that neighbourhood would be first of all covered by a very scanty vegetation of alpine plants. Then would come probably a pine forest covering the whole of the Nith valley, and much later on the old Caledonian oak forest would cover the whole of that neighbourhood. And then, last of all, but still in perfect continuity with the preceding, they had that particular spot of ground utilised by the one animal that was capable of the reverent study of nature, and also of subduing nature for his own purposes. We saw that the vegetation of the earth might be explained and understood scientifically by the study of the first few chapters of Genesis. He was rather afraid when he chose that subject to address them upon that night that he might possibly hurt the feelings of some of them in dealing with this question of evolution from a wholly scientific spirit, but as they saw he had put down the origin of these variations to a vast quantity of minute and imperceptible changes in the environment, or if they wanted one word for it they might say to chance. They might ask—"What is chance?" There was no better answer than the very old one—chance was a cause unperceived by human logic.

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16th February, 1903.

Chairman—Mr JAMES BARBOUR, Vice-President.

I.—THE ASSASSINATION OF THE RED COMYN. By Dr CHINNOCK, LL.D.

The commonly received accounts of the assassination of the Red Comyn derived from Fordun and Barbour are recognised to be largely mythical. They were written sixty or seventy years after the event, and therefore do not possess the validity or credibility of contemporary authorities. On investigation I find that the most authentic account is given by Walter of Hemingburgh, an historian who lived at the time when the event occurred, and whose history is highly valued by students of that period of British history. I have translated his account of the murder of Comyn, and for the sake of verification I append the extract in his own words. John Comyn the younger, generally called the "Red Comyn," was the son of John Comyn of Badenoch, generally called the "Black Comyn." The latter was one of the claimants of the crown, basing his claim on descent from Donald Bane, the younger son of King Duncan and brother of Malcolm Kenmore, whom he succeeded as king. The Black Comyn married Margery, eldest sister of King John Balliol. By his mother, therefore, after John Balliol's own family, young John Comyn had the best claim to the Scottish crown. From the defeat of Wallace to his own death, the Red Comyn was the most powerful man in Scotland. He was appointed by the Scots after Falkirk the Guardian of the realm, and for six years held his position, defeating his English rival, John de Segrave, at the battle of Roslin, 26th February, 1303. After Balliol's renunciation of the crown, John Comyn might be considered the rightful heir, and Robert Bruce could not obtain the crown unless he were removed. Whatever may be thought of Comyn's desertion of the cause of independence, it cannot be denied that he was a great man. I should like to suggest that an inexpensive tablet might be placed in front of the house nearest to the site of the murder, which however inexcusable it may have in itself, was the cause of great good to Scotland; for it impelled Bruce to take the irrevocable step of assuming the crown.

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Translation of an Excerpt from Walter of Hemingburgh's Chronicle, Vol. 2, pp. 245-246.

"In the year of the Lord 1305, Robert de Brus, fifth son of that Robert de Brus who, as before described, disputed with John de Balliol in the presence of the King of England about the throne of Scotland, and, as was shown before, his suit had been rejected by the judgment of the court, relying on perverse counsel, aspired to the throne; and fearing the lord John Comyn, earl of Badenoch, who was a powerful man in that country and faithful to his lord the King of England, to whom he had done homage, and knowing that he could be prevented by him, he sent to him in craft two of his brothers, Thomas and Nigel, to wit, begging him to be so kind as to come to him at Dumfries, as he wished to treat with him on some matters of business which concerned them both. For the justitiaries of their lord the King of England were sitting in the castle on the same day, to wit, the 10th of February, and he suspecting no evil come to him with a small retinue. They saluted each other with a kiss, but not of peace, in the cloister of the Minor Friars, and as they were conversing with each other with peaceful words, as it seemed, suddenly changing his look and altering his style of speech he began to upbraid him for his desertion, because he had accused him to the King of England and had lowered his position to his loss. When Comyn spoke peacefully and exculpated himself, Brus refused to listen to his discourse; but, as he had plotted, he gave him a kick and struck him with his sword, and went away back again. But his men pursued him at once and cast him forward on the pavement of the altar, leaving him for dead. One of his soldiers, however, the Lord Robert Comyn, his uncle, ran to his aid; but Christopher de Sethon, who had married the sister of the Lord Robert de Brus, ran up to him and struck on the head with his sword, and he died. The Lord Robert de Brus went out, and seeing the Lord John's fine steed, he mounted it, and his men mounted with him. They set out for the castle and seized it. And when what had been done was noised abroad the Scots ran to him, and the justiciaries, fearing for themselves, shut the doors of the court in which they were sitting with the few Englishmen who were with them. When he heard this he ordered fire to be brought unless they gave them up at once. But they surrendered, de-

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manding their lives and a safe departure from the country. This he granted them. When this had been done, certain ill-disposed ones told him that the Lord John Comyn was still alive, for the friars had carried him within the vestibule of the altar, in order to administer to him medical treatment and that he might confess his sins. When he had confessed them, and was truly penitent, by the command of the tyrant he was dragged out of the vestibule and killed on the steps of the greater altar, so that his blood touched the table of the altar, and even the altar itself."

NOTE.—Walter is wrong in calling Bruce the 5th son of the claimant of the throne. He was his grandson.—E. J. C.

NOTE.—There are eight MSS. existing of this very valuable history. The best is in the College of Arms, London; four are in the British Museum, two at Cambridge, and one at Oxford. In all of them the name of the author is given as Walter of Hemingburgh. He is so called by Leland, but Bale calls him Hemingford, and his mistake has been generally followed since. Tanner and Hearne were aware of Bale's error. The MS. in the College of Arms has been edited by Hans Claude Hamilton at the cost of the College. Walter Hemingburgh was a canon of the Priory of Gisborough, in the East Riding of York. He was employed by Edward I. to visit many of the priories in Scotland to consult records. Being a friar himself he would be likely to receive an account from the Dumfries friars of an event that horrified the religious world and drew down the reprobation of the Pope. It must be remembered that the year began on the 25th March then, and so what Walter calls 10th February, 1305, was really what we call 1306. The 1st of January was adopted as the commencement of the year by Scotland in 1600, but by England not till 1752.

E. J. C.

II.—THE WEATHER OF 1902. By Rev. W. ANDSON.

The highest reading of the year was recorded on the 31st January, during the prevalence of a northerly type of weather, and amounted to 30.981 in., which, when reduced to 32 deg. of temperature and sea level, would give a reading of 31.018 in., and was followed by a reading almost equally high on the 1st

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Report of Meteorological Observations taken at Dumfries during the year 1902.

Lat., 55° 4′ N.: Long., 3° 36′ W.; Elevation above sea level, 60 feet; Distance from the sea, 9 miles.

1902.	BAROMETER.				S.-R. THERMOMETER. In Shade, 4 feet above grass.					RAINFALL.			HYGROMETER.			
Months.	Highest in Month.	Lowest in Month.	Monthly Range.	Mean Pressure of Month.	Highest in Month.	Lowest in Month.	Monthly Range.	Mean Maximum.	Mean Minimum.	Mean temper. of Month.	Heaviest in 24 hours.	Amount for Month.	Days on which it fell.	Mean Dry Bulb.	Mean Wet Bulb.	Dew Point.	Relative Humidity. Sat. = 100.
	In.	In.	In.	In.	Deg.	Deg.	Deg.	Deg.	Deg.	Deg.	In.	In.		Deg.	Deg.	Deg.	
Jan.	30·981	28·921	2·060	30·034	51·5	20·5	31·	43·5	34·9	39·2	0·67	2·16	19	42·3	40·2	37·5	84
Feb.	30·924	29·187	1·737	29·853	51·5	6·	45·5	40·2	27·7	34·	0·50	2·25	12	36·7	35·2	33·4	88
Mar.	30·196	29·000	1·196	29·717	60·5	27·	33·5	50·5	37·5	43·8	0·27	2·09	23	42·8	40·8	38·6	85
April	30·361	29·383	0·978	29·924	65·	29·	36·0	54·6	37·3	46·	0 72	2·18	12	45·2	41·7	37·6	75
May	30·409	29·211	1·198	29 951	66·5	32·	34·5	55·1	39·7	47·3	0·38	2·02	21	47·7	43·5	38·3	72
June	30 300	29·517	0·783	29·921	86·	38·5	47·5	64·4	43·3	56·3	0 26	1·68	12	56·	52·1	48·4	75
July	30·300	29·212	1·088	29·977	75·	36·	39·	54·4	50·8	57·6	0·69	2·55	16	56·4	52·6	49·1	76
Aug.	30 300	29·500	0·800	29·899	76·	40·	36·	65·8	47·	55·4	0·71	2·91	14	55·7	52·4	49·2	80
Sept.	30·541	28·980	1·561	29·993	73·	32·	41·	62·4	46·5	54·4	0·76	2·29	15	53·9	51·5	49·2	84
Oct.	30·424	28·874	1·550	29 943	61·	30·6	30 4	45 5	42 5	43·4	0·51	2·64	18	48·	45·8	43·4	84
Nov.	30·429	28·974	1·455	29·811	58·	25·	33·	49·	33·9	43 9	0·78	3·59	19	43·4	41·8	39·8	86
Dec.	30·560	28·495	2·065	29·938	62·5	17·5	35·	44·1	36·3	40·2	1·08	4·14	17	41 5	39 7	37·5	85
Year..	30·981	28·195	2·486	29·913	86·	6·	80·	54 5	40·6	46·3	1·08	30·50	198	46·4	44·6	42·5	82

WIND—

	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Var. or Calm.
Days ...	9	39	56	43½	29	88	56	37	6½

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February of 30.924 in. Such very high readings are extremely rare in our climate, occurring only once in a number of years. Since 1887 there has been only one other record of a reading above 31 in., viz., in January, 1896. The lowest reading of the year was 28.495 in. on the 29th December, which also was exceptionally low, being the lowest for a period of nearly three years—since the 19th February, 1900, when it was 28.300 in. This gives a very wide annual range of barometrical pressure, being no less than 2.468 in. The weather of 1902, as a whole, was of a changeable and unsettled character. Even during the summer there was no continuance of fine weather such as we are often favoured with, but for the most part cold and showery days, although with few heavy rainfalls. The mean pressure for the year was 29.913 in., which is somewhat under average. It may be noticed as a remarkable circumstance that there was only one month in which the mean pressure was up to 30 inches, and that was January. In the previous year there were six, viz., February, May, June, July, August, and September. There were few severe storms, but once in January, and on several occasions in the last four months of the year, the barometer fell below 29 inches, and on each of these the weather was more or less stormy. Strong gales were experienced on the 18th and 19th March, in the beginning of September, in the early part of October, in the first half of November, and in the middle and end of December. The most notable of these were those which occurred in September and December. On the former date, viz., on September 3rd, there was a sudden fall of the barometer from 29.637 in. in the previous evening to 28.981 in. in the forenoon of the 3rd. This was accompanied by a severe gale from south and south-west, and by a heavy rainfall, amounting to 1.16 in. for the two days. The result was that the river was flooded, and an abnormally high spring tide occurring at the same time, the Dock Park and Whitesands were covered with water to an unusual extent. But what was more extraordinary than this, the tidal waters, forced up by the strength of the gale, rose so high as to surmount the caul or weir, and to raise the river at the New Bridge one foot higher than it would have been raised by the rainfall alone. Great damage was done to farms along the seaboard of the Solway shore, and on both sides of the estuary of the Nith, many farm fields having

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been flooded with sea water to the depth of six or seven feet, with serious loss both to crops and stock, while numbers of trees were blown down and no small damage done to buildings. In the middle of December there was a repetition of the south-westerly storm, with an extraordinary heavy rainfall, the heaviest of the year—the concurrence of which with a very high spring tide, as in September, occasioned heavy flooding of the river banks and adjoining fields. The amount of rain that fell on the 14th and 15th was about two inches, and the result, as evidenced by the guage on the New Bridge, was to give the river a mean depth of twelve feet, a depth which, as far as my observation goes, it has never exceeded.

Temperature in shade (four feet above grass).—On the whole there was a considerable deficiency both of sunshine and heat during 1902. The absolute maximum, or highest single day temperature of the year, was 86 deg., on the 27th of June. On the 25th and 28th of the same month readings of 83 deg. and 83.8 deg. were recorded. But these were the only days in the whole year on which the thermometer rose to or above 80 deg. The maximum in July was only 75 deg., and in August 76 deg. The absolute minimum for the year was 6 deg. on the 11th of February, and the annual range of temperature thus comes out at 80 deg. Although June had the highest single day temperature, the highest monthly mean was, as usual, in July, which had a mean of 57.6 deg., as compared with 56.3 deg. in June, and that of August also was slightly higher than that of June, although only by one-tenth of a degree. It must be observed, however, that the mean temperature of all these summer months was decidedly below average—June by 1.6 deg., July by about 2 deg., and August by a little more than 2 deg.— and when the mean maximum temperatures are compared the deficiency comes out as much more considerable. Thus the mean maximum temperature for June, on an average of fifteen years, is 67.4 deg., and last year it was only 64.4 deg., which is three degrees less; the mean maximum for July is 68.2 deg., last year it was 64.4 deg., which is nearly four degrees less; August is 67 deg., last year it was 64.4 deg., from two to three degrees less. This means that there was a more than usual deficiency of sunshine and summer warmth during these months. The coldest month of the year was February, which

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had both the absolute minimum of the year and the lowest monthly mean. The average mean temperature for February is 38.1 deg., last year it was only 34 deg., and the average mean minimum temperature for February is 32.5; last year it was only 27.7. The months in which the mean temperature was above average were: March, by 2.8 deg.; October, by 2.6 deg.; November, by 0.8 deg.; and December, by 1.6 deg.—sum of excesses, 7.8 deg. The months in which it was under average were:—January, 0.7 deg.; February, 4.1 deg.; May, 4.3 deg.; June, 1.6 deg.; July, 1.8 deg.; August, 2.1 deg.; September, 0.4 deg.—sum of deficiencies, 15 deg. Hence we may expect to find the mean annual temperature to be not up to average, but decidedly below it. The mean annual temperature during the last fifteen years has ranged from 46 deg. in 1892 to 49.5 deg. in 1898. In 1902 it has only reached 46.3 deg., which is the lowest of the 15 except that of 1892, when it was 46 deg. The average annual temperature is 47.7 deg. The month of April was not mentioned because it was exactly average. It was not an unfavourable month for the season, but the month of May, on which so much depends, was peculiarly unfavourable, with a prevalence of cold northerly and easterly winds and a low temperature, fully 4 deg. below the mean. The number of days or nights in which the temperature fell to or below 32 deg. was in January 13, with an aggregate of 83.2 deg. of frost; in February 14, with an aggregate of 171 deg.; in March 5, with an aggregate of 10.1 deg.; in April 5, with an aggregate of 4.9 deg.; in May 3, with an aggregate of 2.3 deg.; October 1, with an aggregate of 1.4 deg.; in November 5, with 13.2 deg.; and December 9, with an aggregate of 50.3 deg.; being for the whole year, 55 nights, with an aggregate of 336.5 deg. of frost.

Rainfall.—The number of days on which 0.01 in. or more of rain or snow fell during the past year was 198—rain, 191; snow, 7. The heaviest rainfall in 24 hours was registered on the 14th December, when it amounted to 1.03 in., and this was the only day on which it reached or exceeded one inch. The next heaviest was on the following day, when it was 0.95 in. The year, however, was singularly free from heavy rainfalls, and the total amount for the year was very much short of the average, being only 30.50 in., as compared with an average of

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37.44 in. This deficiency was not due to any protracted period of drought, of which, in fact, there was less than usual, but to a deficiency in quantity, spread over the whole year. There were only two periods to which the term of drought or partial drought could be applied, one in February, when for 12 successive days only 0.02 in. of rain fell, and the other between the 24th September and the 8th October, when for 14 days there was only a slight fall of 0.02 in. The latter period proved extremely favourable to the ingathering of the crops in a somewhat late harvest. The true explanation of the small rainfall of 1902 is to be found in the fact that although the number of days on which it fell was very little short of the average, 198, as compared with about 200, the quantity was deficient, that is, below average, in every month except one. In April there was a slight excess, but only to the amount of two-hundredths of an inch. In all the other months, from January till December, there was a deficiency, in some more and in others less, but so much that the accumulated deficiency in the end of the year amounted to almost seven inches. This was the driest year of the sixteen during which observations have been taken at this station. The next driest was in 1887, when it was 30.99 in., and the next to that 32.39 in. in 1893. The average, as before mentioned, is about 37 inches, but the amount has been as much as 47 in., which was the quantity recorded in 1900. In consequence of the deficiency of the past year there has been a scarcity of water, as is well known, in many places. The driest month was June, with a record of 1.68 in., the wettest December, which had a little over four inches.

Hygrometer.—The mean of the readings of the dry bulb thermometer for the year was 46.4 deg., and it is worthy of note that this annual mean, which is calculated from the 9 a.m. and the 9 p.m. readings of every day, corresponds almost exactly with the mean annual temperature as calculated from the daily maxima and minima. This coincidence has been noticed in previous reports, and it shows that the mean temperature may be correctly ascertained by either of these methods. The mean of the wet bulb thermometer for the year was 44.6 deg.—dew point, 42.5 deg.; while the relative humidity for the year was 82 (saturation being equal to 160). This is rather less than the average, which is more frequently 83 or 84, and corre-

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sponds with the deficiency of rainfall by which the year was marked.

Thunderstorms, etc.—During 1902 thunderstorms were rare, and hail was equally uncommon, but lunar halos were not unfrequently observed, especially in the later months of the year. With regard to the wind observations, the south-westerly, as usual, blew on the greatest number of days, viz., 88; the next in point of frequency were due west and east, which prevailed each on 56 days; the next was the south-east, with 43½ days; and the north-east and the north-west, which were nearly equal, the north-east having 39 days, and the north-west 37; due south had 29, and due north 9, and 6½ were variable.

WEATHER AND HEALTH.

Dr Maxwell Ross proposed a vote of thanks to Mr Andson for his valuable paper. The weather of the year had been exceptional, but it had not had very much effect on the health of the community, except that it might be that it had rather improved the health than otherwise. He found that of the eleven areas which he served as medical officer of health and the statistics for which he had to collect, there were only two whose death-rates were higher than their averages for a considerable number of years. In not one of the county districts, where he had the averages for something like twenty-one years, was there any death-rate above its average. The county death-rate was one of the lowest we had had during the past twenty years; he did not know that there was a lower. The zymotic death-rate was certainly the lowest. And one very curious fact had been that the death-rate from diarrhœa and enteric fever or typhoid, diseases which were associated with the warmer period of the year, had been lower than they ever were before in his experience in Dumfriesshire. He was rather interested in working out from the averages what one might call the "expected deaths" for each month of the year. He got this very curious result. In January, which was a favourable month but followed a very stormy December, the deaths were actually 28 less than the expected number. In February the actual deaths were 19 less than the expected deaths; in March, 8 less; in April, 36 less. Then they had a series of months, four following each other, in which the actual deaths exceeded the expected deaths.

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In May, a cold month, in which there was a prevalence of north and easterly winds and a temperature below the average, 94 deaths occurred, against 87 that were expected. That was due largely to consumption and such diseases carrying off patients. It was an inclement month, and naturally those whose constitutions were weakened by phthisis were more liable to be cut off. The death-rate from respiratory diseases was also high, although not the highest of the year; and deaths from nervous and malignant diseases were high. There were no deaths from zymotic diseases. In June the actual deaths were nine over the expected; in July they were seven over; in August, also seven over. Then we had a series of three months in which the actual deaths were again very much less than the expected number. In September 49 deaths occurred, as against 67 expected; in October 62, as against 72; in November 70, as against 71. In December again the actual deaths were higher than the expected—96, as against 79. In that month we had also a high death-rate from consumption, respiratory diseases, and influenza; and also from developmental causes: these were deaths which occurred at the extremes of life, from premature birth and deaths in old age. Altogether, although it had been a very odd year so far as weather was concerned, and although there had been a great deficiency of sunshine, it had not had an unfavourable effect on the death-rate. Part of the lowered death-rate was, of course, due to other causes, but the weather was a factor in causing a higher or lower rate of mortality. While it would be heresy on his part to suggest that our improved sanitation had no effect, still he thought we should be cautious in attributing the improved death-rate of last year entirely to that cause. He thought the weather had had a very considerable influence. And he said that because he had seen in the newspapers several people claiming an improved death-rate as an evidence of how well their sanitation was carried out. Now a wise man would wait a little before he boasted of a low death-rate as a result of improved sanitation in the place where he lived, because the result of that improvement would only become apparent after a period of years. Sir Emilius Laurie had been kind enough to send him a record of the rainfall at Maxwelton House for the last year; and Mr Lyall sent him records taken at the schoolhouse in Ewes and at Ewes Burnfoot. At Maxwelton House the

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fall for 1902 was 39.70 inches; the average for fifteen years, 45.90. At Ewes Schoolhouse the fall was the lowest of any recorded year, being 36.5 inches. The next lowest record was in 1889, when it was something like 38 inches. Sir Emilius Laurie contrasted the rainfall at Maxwelton House with that at Folkestown and Hatfield, which he got. At Folkestown the fall for 1902 was 21.99 inches; and at Hatfield, 18.03. In January of this year the fall at Maxwelton House was 8.49 inches; at Folkestown, 2.29.

III.—THE SPARROW HAWK (ACCIPITER NISUS *Linn*). By Mr ROBERT SERVICE.

Amongst our British diurnal raptorial birds we have vultures, eagles, falcons, hawks, kites, buzzards, and harriers—groups of birds distinguished from each other by well marked characters and habits.

Our sparrow hawk is the type and representative of the hawks. It is not a falcon, and a falcon is never a hawk, although the transposition constantly occurs in the conversation and ideas of sportsmen of all degrees.

The hawks are distinguished from the falcons, mainly (although there are several other good distinctions), by the possession of short wings. This strong structural character affects their mode of life, and in consequence we do not find in their case the high powers of flight, and the meteoric rush with which the peregrine, for instance, dashes upon its prey.

Throughout our area by far the most familiar raptorial bird is the sparrow hawk. On the moorlands the kestrel may outnumber it, and the merlin may claim our attention as often; while in districts where woods and plantations abound, the brown owl and the long-eared owl may be more abundant, still our subject is the species, amongst the birds of prey, that comes oftenest under ordinary and general observation.

During the months when the autumn migration is going on the sparrow hawk is most in evidence, and it is during that period of very regular and evenly distributed abundance. The word "abundant" is in this connection a comparative term. From the very nature of the case, birds of prey of any British species in ordinary circumstances can never be more than widely

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scattered points, or in the breeding season small and very isolated family parties.

During winter also, but becoming scarcer as the season advances, sparrow hawks are not at all uncommon. With the spring migration a sudden accession of numbers takes place, most of the birds passing onwards, northwards, and eastwards. As a summer resident the sparrow hawk has become greatly reduced in numbers, and althought a nest is still no rarity it is not nearly so common as formerly. There can be little question that since the modern form of game preserving set in, now some seventy or eighty years ago, the resident or breeding stock of sparrow hawks has been destroyed outright at least half a dozen times over. The places or beats of the birds thus killed are filled again each season by arrivals from other parts of the western range of the spieces. This process, however, shows signs of coming to an end, as it cannot go on for ever; and, like other members of our native fauna, subjected to like cruel treatment, the sparrow hawk is bound to be finally banished from the land.

In boldness there is none to surpass it, for while the kestrel flies off and keeps at a discreet distance, the sparrow hawk, more especially the male, will dash past within a yard or two, and seize a bird almost within one's reach, or chase its intended victim right to one's feet, as has happened more than once in my own experience.

The female rarely ever takes a bird larger than a blackbird or a thrush, and only seldom does she take any except the small warblers or finches. A robin is a favourite prey, and another bird that is often taken is the greenfinch. These birds are fond of sitting engaged in meditation on conspicuous points of shrubs and hedges, clear of the thicker growth of branches and twigs, and so when this hawk glides suddenly along he falls upon the unsuspecting bird in an instant, and striking out with whichever foot is nearest as he passes, without swerving or pausing in flight. Should he miss, as very seldom happens, the robin or greenfinch will be off into the nearest thicket uttering a series of terrified squeals, the hawk meanwhile wheeling in a moment and pursuing it through every twist and turn with marvellous speed and dexterity. Hunting along the hedgerows is a favourite mode of seeking its food. Gliding along the top, now dipping down to one side, and then to the other, whisking through every

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gap or gateway, skimming along the surface of the adjacent fields, it dashes along, and not seldom pounces upon some unwary small bird, strikes it dead with one movement, and bears it off. Scarcely any small bird is exempt from capture if it is out in the open, and cannot reach the shelter of bush or hedge in time. Notwithstanding the trivial name of this hawk, the ordinary house sparrows are, perhaps, less frequently caught than most other small birds, whereas the kestrel takes them quite commonly. Another way in which the male sparrow hawk is often successful in catching a bird is to glide through some opening in a large, thick tree, and snap up a victim on the other side.

The female, as a rule, seeks a somewhat different class of prey. Being fully twice as large and proportionately more powerful than the male, she is able to take much bigger birds than her rather diminutive partner. Her habits are also a little modified to suit. While never declining to snatch a small bird should the opportunity be tempting, the female likes best to catch something more bulky. The great natural enemy of the wood pigeon in this country is the female sparrow hawk. I well remember hiding once to shoot wood pigeons, having set out a stuffed specimen as a decoy. While patiently waiting there was a rush of wings, and a big female sparrow hawk knocked my stuffed pigeon several yards away, but without making her clutch good. Wheeling round with great rapidity she came at the stuffed bird again, but without hitting out a second time, she evidently, from her very palpable look of astonishment, as she hovered for a second or two, decided there was something wrong, and made her way at once. I was so interested in the whole sudden incident that I never thought of firing at the hawk, and it flew off unharmed.

The great flocks of lapwings that gather in autumn constantly furnish food to the sparrow hawks, which are never very far away when lapwings are numerous.

Both sexes of this bird have one particular trait that has incurred to them the universal hate and enmity of gamekeepers. Once they ascertain that pheasant chicks are to be had by a sudden raid across the rearing field, they will be daily visitors, and will only cease the practice when shot. And they are very difficult to shoot in such a case. Whether they know that danger may be doubted, but it is a fact, that when stealing pheasant

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chicks, they are specially wary and never seem to come the same road twice. I have seen the keepers watch for days before they got a chance of hitting a hawk that had been visiting the coops.

In the autumn and early winter months when it is the custom of birds to gather round the stackyards in large numbers, the sparrow hawk will almost certainly pay the assemblage a visit once a day. The evening, just about sundown, is a favourite time of choice. Picking a scanty sustenance round the stacks of grain, the birds are all unsuspecting. Some chaffinch will catch a glimpse of the enemy gliding onwards like a shadow, and he utters his warning "chink." Thereupon the birds will disperse instantaneously into the nearest shelter, but one of their number is missing. The hawk is away with his supper as silently and swiftly as he came. A minute or two of silence amongst the shrinking birds in the thorn bushes, and then one after another they forget their alarms and resume their search for food as if nothing had happened.

But birds are not at all the only sustenance of the sparrow hawk. They take rats and water voles, mice and field voles at times; now and again they will descend to frogs, and occasionally they will catch young rabbits. Once I put a female sparrow hawk off a partly devoured adder.

The sparrow hawk's dining table is usually on some little mound or elevation; sometimes the top of a large stone or the flat surface of a dyke or wall, perhaps the flat stump of a tree or a broad surfaced horizontal branch. Here the feathers plucked from its latest victim are scattered around. It is often of interest to identify the species on which they have been feeding, and this can be easily done. The feathers are not eaten except by chance. Like all other birds of prey, the sparrow hawk ejects the indigestible part of its food, such as bones, feathers, fur, etc., in little pellets.

The predilections of this species for darting through holes in hedges and along narrow spaces, such as lanes and woodland gates, is, I believe, the reason why the sparrow hawk is so often killed by dashing itself against windows. I never knew any but this species immolate itself in this way. In flying along in its usual sneaking fashion the bird sees the window reflecting a close fringe of shrubs with what it imagines is a nice clear space in the centre for darting through. So on it comes into a

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headlong dash, but, alas, it is to knock its brains out against the supposed gap in the shrubs.

Sparrow hawks pair for life—the very brief life that game preservers allow them. Their courtship is a curious one. It is reminiscent of an old adage still sometimes heard amongst country people—"Nippin' and scartin' are Scots folks' wooin'." To watch a pair of hawks engaged in wooing is to see a couple of birds that the casual observer might well think were fighting. Dashing at and buffeting each other, uttering short cries, while wheeling about in the air, their demeanour is suggestive of anything rather than love. By and by they settle down in some tree, where, after a good deal of preliminary sparring the female will ultimately condescend to allow her little lover to stroke her feathers with his bill—a duty he performs very gingerly and warily, and with one eye always watching for a sudden assault from her sharp talons.

In April a spot is chosen for the nest, a favourite site being some 15 to 18 feet up an old spruce tree, and close to the trunk. They always build their own nest, but now and then will use an old squirrel's drey or a wood pigeon's old nest for a foundation. By the middle of May the full clutch of eggs is laid upon the shallow saucer-shaped hollow over the twigs that form the nest. The eggs vary to a great extent from bluish-green, almost spotless specimens, to others that are quite clouded over with reddish brown of several shades.

The young are attended to with great assiduity, and at this period the parents are most relentless in their pursuit of prey of all kinds. The small birds suffer most at this time, and a visit to a sparrow hawk's eyrie at the time the young have begun to scramble out of their nest along the branches is most instructive. All the food lying about the nest will be found to be mostly warblers, and no game birds at all. As happens with all the birds of prey, the young when able to take care of themselves are driven off their parents' beat and are never allowed to return to their birthplace.

In the days when falconry was the prevailing sport this species was held in a higher reputation than it has any hope of enjoying amongst sportsmen of the present day. The female, under the laws of falconry, which assigned different kinds to different ranks, was entitled to be carried by a priest, while the

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male, then known as the musket, could be carried by the holy water clerk. Shakespearian students will recollect how, in "The Merry Wives of Windsor," Mrs Ford addresses Falstaff's page with, "How now, my Eyas Muskett?"—an Eyas Muskett being a young male sparrow hawk taken from the nest. There is no doubt that falconry, having for generations almost ceased to exist in this country, has now began again to increase in favour. In its revival lies a great hope that the unwise destruction of our native raptorial birds may cease. I do not wish for a moment to deny that the present species is rapacious and destructive in the extreme. But are there no points to be put to the credit side of the ledger? No other species so effectively keeps the small seed-eating birds in check, and that most destructive pest to the farmers—wood pigeons—could be greatly reduced if there were more sparrow hawks. And a prime consideration is that no estate enjoys a proper amenity, and its full share of natural beauty without a fair head of all the birds of prey. The damage done to game in conseqence would be comparatively trifling. One pair of sparrow hawks in the course of a year on an average estate would not cause as much injury to game as would the efforts of one bad shot on a big shooting day.

A few words about the plumage of this species will end this narrative. The young birds are at first covered with white down, which gives place to a general sepid brown feathering above, all the feathers margined with rufous. The under surface of body is white, the throat narrowly streaked with black, the foreneck and chest with broad rufous streaks, flanks and thighs barred with dark brown.

The young plumage remains for one or two years, and these birds sometimes breed while still in miniature feathers. The first adult dress with bars underneath seems to be gained by the breaking up of the paltern on the feather, rather than by a complete moult. The broad centre of pale rufous alters in shape and breaks off into bars, and the heart-shaped spot on the terminal part of the feather being absorbed, the bird is then in fully adult plumage. With old age the birds become more and more rufous.

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20th March, 1903.

Chairman—Mr J. BARBOUR, Vice-President.

SCOTTISH LIFE IN THE 17TH CENTURY: ILLUSTRATED SPECIALLY FROM DUMFRIESSHIRE AND GALLOWAY.

By Mr W. DICKIE.

I propose to make Dumfries the central point for a cursory survey of the conditions of life in Scotland in the seventeenth century. It is desirable as a preliminary to have some idea of the appearance and extent of the town at that period. It is not possible to construct a complete or perfectly reliable mental picture, but it may be done with approximate accuracy. The town then was in its main outlines wonderfully like what we may call the old town of to-day. It consisted of the High Street; part of Friars' Vennel; the Kirkgate; East Barnraws, somewhere in the neighbourhood of the present Loreburn Street, and having as one of its boundaries the Loreburn, which figures in the motto of the burgh; a small street between these two called the Midraw, extending from "the Rattan Raw," our present Chapel Street, on the one hand, to what is now Queensberry Square on the other; the Lochmabengate, now known as English Street; and west of the High Street, a street called the West Barnraws. And off the various streets were, as now, numerous closes. Then there was, of course, "the brig-en'," which has developed into Maxwelltown; and on the Troqueer Road there was a village known as "the Toun of Troqueer." At the top of the High Street, on the site of Greyfriars' Church, stood the castle, or rather battlemented town house of the Lord Maxwells, which had been in rather a dilapidated condition since 1570, when the town was burned by an English force, under the Earl of Sussex and Lord Scrope. The more ancient castle of Dumfries, in the neighbourhood of Castledykes, had ceased to be a place of strength. The New Wark, a two storey building with some slight pertensions to fortification, and commanding extensive vaults for protection of the valuables of the citizens in times of danger, stood on the south side of what is now Queensberry Square; and in the square were also the flesh market and the slaughter-house. An extensive improvement was carried out about 1770, when a new flesh-market was built and King Street, or "the Wide Entry," was opened up. At the earlier period to which our notes refer, part of the Greyfriars' Monastery, which lay between Castle Street and St David Street, was still standing; but it had been unoccupied for about a century, the Reformation having suppressed it and other conventual establishments. The Midsteeple had not been built. But on the High

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Street, a little south of the shop of Messrs Kennedy & Co., seedsmen, stood the old Tolbooth and Council Chambers, which were erected in 1627. The Meal Market was also in High Street, on the space, I suppose, now occupied in the summer season by the gardeners' stands, and the Fish Cross was near it. A little above the site of the Midsteeple, on the spot occupied by a jeweller's shop, was a one-storey building, with the Town Cross on its flat roof. There was only one place of public worship in the town, St Michael's Church. It was not, of course, the present edifice; that dates from about the middle of the 18th century; and it appears to have been "a church without a steeple." It had been the Roman Catholic Church of the town, and after the Reformation it was occupied by a Protestant congregation. There had been two other pre-Reformation churches in the town—one, the Church of Our Lady, near where is now the office of the Bank of Scotland in Irish Street; the other, the Church of St Thomas, the site of which I have seen variously given as between St Michael Street and the river, and as in High Street, near the Coffee House. There was also, on the eminence now crowned by St Mary's Church, a chapel erected by the sister of Robert Bruce in memory of her husband, Sir Christopher Seton, who had suffered death on the spot, at the hands of the English troops; but this little church was never, I fancy, used to any considerable extent as a place of public worship, and since the Reformation both it and the churches of St Thomas and Our Lady had been closed. None of the public buildings was of imposing appearance, if we except the castle, and it was in a partly ruinous state.

Regarding the dwelling-houses the Lord Provost of Glasgow and one of the city bailies, who passed through the town in 1688, have left this record: That they were either composed of mud walls strengthened by upright wooden posts, or were built of stone laid in clay and thatched with straw or heather. The shops, say the same observers, were small and ill-lighted, with naked walls, seldom plastered, and often not even floored or paved. Of the dwelling-house accommodation of the rural population the same visitors give us the following picture:—"Many of the farm houses were built in part and some altogether of turf, or of mud, plastered on stakes and basket work. The window was composed of a few panes of glass and two boards that opened like shutters for the admission of air. On the small farms part of the dwelling-house was occupied by the cattle, which generally entered by the same door with the family—the one turning by the trance-door to the kitchen, the other the contrary way to the byre or stable. The people in the kitchen could see but to the byre and the cattle saw ben to the kitchen. The houses of the labourers consisted of a single unceiled apartment, with clay floor, unclean and full of holes." The

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chroniclers do not mention, what we know, however, to have been the fact, that the business of many classes of tradesmen was conducted in little wooden booths which were set out on the High Street for display of their wares on market days. Many of the houses, I fancy, would be entirely of wood, for we know that on several occasions, one of them being about 1598, the town suffered severely from fire; but we have on old dwelling-houses in the High Street dates on stones going back to 1604.* The old Turnpike House, built in the seventeenth century by Sharpe of Hoddam, the sheriff clerk of Dumfries, and occupied during his last years by the notorious Grierson of Lagg, was known by way of distinction as "Hoddam's stone house." The proprietor of Hoddom owned also the adjoining house, which was of wood, and on the site of which the building now known as the Commercial Hotel was erected some time before the visit of Prince Charlie. Regarding the method of building and the materials employed, we get a local glimpse in Mr Colville's "Byeways of History." "At Canonbie, 1769, the owner prepares the materials—clay mixed with straw—summons his neighbours for a day's darg (work) at daubing, who come with victuals at their own cost, and setting cheerfully to work complete the house before nightfall. At Dornock, Annan, 1792, all the houses in the village, save the manse and two others, were of mud and thatch. I have easily pushed my walking stick into the front wall of one of these houses. They are still common at Gretna Green." So says Mr Colville; and the statement agrees with that in a well-known letter written by Mr Maxwell of Munches, that "there was almost no lime used for building in Dumfries, except a little shell-lime made of cockle-shells, burned at Colvend," and that, "in 1740, when Provost Bell built his house, the under storey was built with clay, and the upper storeys with lime brought from Whitehaven in dryware casks." The Old Bridge was the only means of crossing the Nith, except by fords, and the town was deprived even of it for some time. Great part of the bridge was carried away by a spate in the year 1620; and in the absence of a Devorgilla or a Miss M'Kie, the burgesses had at their own charges to rebuild it. An Act of Parliament of the period sets forth that this was a work so herculean as to be "maist incredible

* On the skew-stone of a three-storey building in the *Standard* Close, High Street, date and initials are carved as follows :—

1604
P T
M A

In the front wall of the Hole-in-the-Wa' Inn, High Street, which is in the line of the old "Mid Raw," is a marriage stone bearing the date 1620. The small house at the Maxwelltown end of the Old Bridge, on the south side, and partly resting upon it, was built in or very shortly before 1660.

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to have been performit by thaim without His Majesty's help" —a help, by the way, which had been invoked and refused— and by way of reward the formerly existing right of the magistrates to levy bridge dues was renewed and confirmed.

The caul at this time was above the bridge, instead of below it; and the Town Mills were on the Dumfries side of the water. The change to the Maxwelltown site was made after the destruction of the old mills by fire in 1780. The town, like most towns of any importance at that time, was enclosed by a wall for purposes of defence, except on those sides where it was protected by the river. The wall started at about the Moat House, was carried in a line to Sir Christopher's Chapel, then made a curve towards St Michael's Church; and terminated at the river a little below Swan's Vennel. Part of it was built of stone to a height of 8 feet; other portions consisted of an earthen bank, strengthened by stake-work and protected by a deep ditch on the outer side. There were three gates. One was the South, or Nether Port, near St Michael's; another the North Gate, at Townhead; the third, the East Gate, near the site of St Mary's Church. There was also a gate, or "port," on the bridge; and there was an inner gate, or "port," half-way up Friars' Vennel: hence the name "Port of the Vennel."

Having said so much of the town, let us turn to the inhabitants and see how they fared, using the word in its literal sense. Some of the dishes which we have come to regard as necessaries of life were absent from their tables. Potatoes were not yet cultivated in this country, and tea was only beginning to be known as an expensive luxury of the rich, the price being as high as 30s a pound, and money being very scarce. Butcher meat was little known at the tables of the common people. Even a Protestant Parliament, which must have been indoctrinated with vegetarian views, passed a law forbidding the eating of flesh either on Fridays or Wednesdays, because of the great scaith said to be occasioned to the realm by its too great consumption; and this prohibition was repeated, I know, in the Acts of the Town Council of Kirkcudbright, and I suppose in those of other burghs. But whether the danger apprehended was to the health of the king's subjects or to the wealth of his realm, this sumptuary law could not be required to restrain the over-indulgence of the peasant or tradesmen classes. A well-informed writer on the condition of Galloway about this period (the Rev. Mr Mackenzie, author of the "History of Galloway") says (Hist. Gal. ii., 335-6):—"The food of the common people consisted of the meanest and coarsest materials, besides being dirty and ill-cooked. Those lived comfortably who could obtain a sufficient supply of brose, porridge, and sowens, perhaps made of meagre grain, dried in pots, and ground

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in querns, with greens, or kail, occasionally boiled in salt and water. They seldom or never tasted animal food except the carcases of such beasts as either died from stravation or disease; it was a rare thing to slaughter even an old ewe for winter provision. The common people had as yet acquired no luxuries except tobacco, though the higher classes possessed a few. Their chief drink was fermented whey, which they kept in barrels sometimes for a whole year, or a kind of ale, which is said to have been still manufactured from heather."

To recur to our magisterial visitors from the city of St Mungo, they inform us that: "In the county of Dumfries there was not so much victual produced as was necessary for supplying the inhabitants, and the chief part of what was required for the purpose was brought from the sand-beds of Esk on tumbling cars on the Wednesdays to Dumfries." One of the citizens informed the Lord Provost that when the waters were high by reason of spates, there being no bridges, so that these cars could not come with the meal, he had seen the tradesmen's wives crying because there was none to be got. The same statement occurs in the letter of Mr Maxwell of Munches above referred to. They mention, however, as a compensation for the general poverty of the fare to be got at hostelries on the way, that they were able to procure an abundant supply of claret and French brandy at 18d a bottle. Scotland had at that time a considerable trade with the continent, and large quantities of wine were imported. Dumfries, however, fell behind in this commerce because of the difficult navigation of its river. Only some three small boats seem to have traded from the Nith to France, Norway, and Sweden; France supplying wine and brandy, Norway wood, and Sweden iron. Kirkcudbright had most of the sea-borne traffic of these parts.

In the passages which I have quoted nothing is said about what has come to be regarded as the national drink—whisky. But we know that it was manufactured in Scotland at that time, not only for home consumpt but for exportation. An Act of Parliament of date 1661 imposed an export duty of two ounces of silver on every barrel containing ten gallons of aqua vitæ, and an excise duty of two merks Scots per boll malt used in its manufacture for home consumption. All aqua vitæ or strong waters imported from other countries was to bear a customs duty of 6s per pint; and an Act of 1663 expressly prohibited its importation. And the disciplinary records of the Kirk Sessions shew that it was a drink in common use in this district, for in the frequent proceedings following upon drunken brawls we have reference, in the Session records of Dumfries in the seventeenth century, to indulgence in "strong waters." I have no doubt that among both the Dumfriesshire and Galloway hills there were

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many stills, the produce of which found its way into the cottage homes of which Mr Mackenzie presents a rather gloomy picture.

It is interesting to note the light which is thrown on the Scottish commerce of the period by the Act of Parliament to which I have just referred—the 17th of the first Scottish Parliament of Charles II. That statute prescribes export duties on herring, salmon (regarding the efficient packing of which stringent regulations were laid down by the same Parliament), butter—the Scotch then had not, apparently to send to Denmark for supplies—beef, eggs, oats, wheat, flour, cheese, horses, cattle, and various other products of the field and farm; and a very respectable catalogue of manufactures, including such things as sword blades, iron ordnance, horse shoes, pans of brass and iron, pewter work, linen cloth, plaiding, silk and worsted ribbons, sail canvas, saddles, shoes. In a list of skins liable to export duty it seems strange to a twentieth century reader to find that of the wolf. In the list the rabbit figures by its old Scotch name of the cunning; the martin by the name of the mertrick; the fox as the tod; the polecat as the fulmert. In the restrictive spirit of the times Parliament soon afterwards passed an Act to prohibit the export of skins, as they considered it hurtful to the interests of native furriers to send out the raw material for use by rival tradesmen in other countries.

We return from this digression to the diet of the people. The want of flesh meat would in sea-board districts be in large measure supplied by fish. And we have the testimony of a contemporary poet—for the graces of the muse were cultivated even in that disturbed time—to the picturesque variety of dishes that were available to a stout stomach. I quote from "The Blythesome Bridal," by Francis Sempill, a Renfrewshire bard, to whom is also attributed the song, "Maggie Lauder." He thus, with amusing and somewhat sarcastic amplitude of detail, catalogues the dishes at a rural wedding feast:—

Fy, let us a' to the bridal,
For there will be lilting there;
For Jock's to be married to Maggie,
The lass wi' the gowden hair.
And there will be lang kail and porridge,
And bannocks o' barley meal;
And there will be good saut herring,
To relish a cog of good ale.

And there will be fadges and brochan,
With fouth of good gabbocks of skate,
Powsowdy and drammock, and crowdy,
And caller nowt-feet in a plate;
And there will be partans and buckies,
And whitings and speldings enew,
With singed sheepheads and a haggis,
And scadlips to sup till ye spew.

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And there will be lappered milk kebbocks,
And sowens and farls and baps,
With swat and well-scraped paunches,
And brandy in stoups and in caps;
And there will be meal-kail and castocks,
With skink to sup till ye rive,
And roasts to roast on a brander
Of flukes that were taken alive;

Scrapt haddocks, wilks, dulse, and tangle,
And a mill of good sneishing to pree;
When weary with eating and drinking,
We'll rise up and dance till we dee.
Then fy, let us a' to the bridal,
For there will be lilting there;
For Jock's to be married to Maggie,
The lass wi' the gowden hair.

Fadges were large, flat loaves; brochan is oatmeal boiled to a consistency somewhat thicker than gruel; powsodie is sheep's-head broth; drammock is meal and water mixed in a raw state, what country people often call "beggar's porridge;" scadlips is thin broth; lappered milk kebbocks are, of course, sour milk cheese; swats mean new ale; skink may either refer to drink in general, or to a strong soup made of cow's hams; and dulse and tangle are names still familiar for edible kinds of sea-weed.

Ale was then a staple article of diet, and it was one of the curious duties of the Town Council to fix annually, at the close of harvest, the price at which it was to be sold during the year then ensuing. The meeting for this purpose was called the assize of ale. There was also an assize of bread, which fixed the charges that bakers were permitted to make; and sometimes the price of candles also was a subject of municipal regulation. The price of the bread and the ale depended, of course, on the abundance or scantiness of the harvest, and the records of that early period reveal to us, despite the hilarity of the songster of rural mirth, a community hovering painfully near the verge of starvation.

Agriculture throughout the country was of a very primitive kind, and this district, long disturbed as it was by border raids and clan feuds, had made but slow advance in the arts of peace. Our friends the magistrates of Glasgow in their progress from Dumfries to Carlingwark (now Castle-Douglas) found the country a wide tract of black moss, extending for miles on each side, overgrown with whins and broom, but utterly destitute both of enclosures and trees, a few isolated dwellings, a cottage or a farm house, alone indicating that the desolate-looking district was not wholly uninhabited. Little grain was grown but coarse, grey oats; and the harvest was often so late, on account of the dampness of the soil from want of draining, that it was no uncommon thing for the crop to be cut amid frost and snow, and

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even then in an unripe condition. Ploughing was a laborious operation, performed with a ponderous wooden plough, drawn either by four horses or eight oxen, or by a mixed team. A district so circumstanced could have no surplus sustenance even in a good year, and a failure of the harvest meant literal famine. Foreign countries could not as now supply the deficiency, and in the absence of proper roads communication even with other parts of Scotland was beset with some of the difficulties of modern African exploration. It was not until 1664 that even a weekly postal service between Dumfries and Edinburgh was established. Pestilence often followed in the steps of famine. We have frequent references to "the pest" in Council minutes. One year, when it raged in Dumfries, the civic rulers of Kirkcudbright prohibited all communication with the town or even with the district east of the Urr, and required the householders —"all that raise reik" they are expressively termed—to take turns as an armed guard to see that the cordon was not broken. In 1623 the whole of Scotland suffered grievously from famine and plague, and it is computed that the town and parish of Dumfries lost a ninth part of their inhabitants. In 1665 the "pest" was raging in London, and to guard against contagion by the visits of the southerners or the introduction of English merchandise, the Town Council of Dumfries gave orders that twenty-four burgesses should keep watch and ward day and night.

So much for the food of the period. Let us now glance at the dress. In England the costume of both sexes, among the higher classes, underwent changes of fashion as frequent as they do in our own days, and even more striking. That of gentlemen in the time of Charles I. is considered the most picturesque in English history, its chief characteristic features being the high-crowned beaver hat with a plume of feathers, a close-fitting doublet with pointed lace collar, which gave to the costume the name of Vandyke, breeches reaching to the knee, tight-fitting stockings, and a cloak after the pattern of the Spanish mantua hung from one shoulder. The ladies during Charles's reign gave up the unsightly farthingale, a sixteenth century exaggeration of the crinoline of a more recent day, and adopted a simpler and much more elegant style of dress; but they gratified their love of display by enormous trains, which required in the case of ladies of fashion the attendance of several pages in order to bear them. But Scotland, exempt from the temptations to imitate a luxurious court, and with less of wealth at its command, seems to have escaped in large measure the fantastic changes of the time. Certainly they little affected the common people, with whose condition we are chiefly concerned. They, free from "luxury's contagion," preserved in the article of dress, as in more weighty matters, the rustic

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simplicity of their lives. Tartan was going out of use as the common material of dress in the lowlands; but it was still preserved in the plaids of the men and in the "screens" of the women, the latter being a light shawl, which in the case of unmarried persons was made to serve the purpose of a head-covering. The men at the time of which I speak wore coats of waulked plaiding, made of a mixture of black and white wool in an undressed state, and the product, of course, of their own looms; their knee-breeches were of white plaiding; their head-dress was the Kilmarnock bonnet, of blue or black, only the lairds wearing hats; and their shoes were rudely made by shoe-makers—cordwainers they were called—who exposed their wares on the street twice a week in the town, or who travelled from house to house in the country. Shirts were little worn, and they were made of coarse woollen. The gowns of the women were made of coarse plaiding or drugget; and home-made linen was used in the wardrobes of those who could afford it. Allan Ramsay belongs to a somewhat later date; but we may accept his picture of rural life in "The Gentle Shepherd" as fairly applicable to this period; and we have a glimpse of the prevailing style of dress in Jenny's description of Roger, her shepherd beau:—

> "He kaims his hair indeed, and gangs richt snug,
> Wi' ribbon-knots at his blue bonnet lug,
> Whilk pensilie he wears a thought a-jee;
> And spreads his gartens diced beneath his knee;
> He faulds his o'erlay doon his breast wi' care;
> And few gang trigger to the kirk or fair."

For a glimpse of those of higher degree we are again indebted to the Lord Provost and his travelling companion. The laird of Munches, whom they went to visit, was wearing a broad blue bonnet, a long home-spun coat of blue colour, knee breeches of the same material, and rig and fur stockings. Lady Munches, as his wife was termed by the custom of the period, wore a close linen cap ornamented with a coloured ribbon, and a gown composed of lindsey-woolsey spun in the family and woven by the village weaver. But on state occasions, such as the Hogmanay festivities, which the city visitors witnessed, the dresses were expensive and even ostentatious. The clothes of gentlemen in full dress were fringed with gold and silver. The coats had very wide sleeves, with immense cuffs folding back nearly to the elbows, and were ornamented with a profusion of large gilded or gold buttons. The waistcoats descended nearly to the knees, and contained most capacious pockets. The breeches were short, and the knees and shoes sparkled with immense silver buttons. Elderly gentlemen wore large wigs, decorated with numerous rows of curls, and a large toupee in front, the whole surmounted with a magnificent cocked hat.

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The younger male members of the family had adopted the fashion of powdered hair. When they went abroad these gentlemen carried a gold-headed cane in their hand, reaching to about a foot above their heads, and grasped by the middle. Swords were regarded as an indispensible article of fashionable costume. Ladies, when visiting or receiving company, wore silk gowns with gold or gilded buttons or fringes. These gowns were very long in the waist, with long flowing trains. High-heeled shoes and silver buckles were the fashion. The hair was so dressed as to stand almost erect, and was covered with a fine lawn head-dress, with lappets of Flanders lace, and penners which hung down from the back of the head. The visitors were surprised at the splendour and costliness of the ladies' dresses, but were privately informed by the hostess that two suits would last for life, and that they were not renewed except at marriage or some other great event.

I have already drawn on a contemporary poet of the west country for a description of a rural feast of the period. Let me give you a stanza or two from the verse of a more noted man, Sir Richard Maitland of Lethington or Thirlstane, who belongs rather to the close of the sixteenth century, in order to illustrate the fact that the ungallant pastime of satirising the ladies' apparel is no modern growth, and that fine dressing was no monopoly of the nobility or county families. Sir Richard wrote a long "Satire of the Town Ladies," of which this is a sample:—

"Sum wives of the burrows-toun
Sa wonder vane are and wantoun,
In warld they watt not what to wear,
On claithes they wair monie a croon,
And all for new fangleness of geir.

"Their goons are costlie and trimlie trails;
Barrit with velvons, slieve, neck, and tails,
And their foreskirt of silks seir [several],
Of finest camroche their faik-sails [over-mantle],
And all for new fangleness of geir.

"And of fine silk their furrit clokes,
With hingand sleeves like geill-pokes;
Na preaching will gar them forbeir
To wear such things that sin provokes,
And all for new fangleness of geir."

Others of Maitland's poems shew us how wonderfully similar, under varying circumstances, has been the condition of human life from age to age. In these verses, for example, you would think you had a present-day wail about landlord oppression and the decay of agriculture:—

"Some with deir farme are herriet haill,
That wont to pay but penny maill;
Some by their lordis are oppressit,

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Put frae the land that they possessed;
Sair service has some herriet soon;
For carrage als some has no rest,
Tho' their ain work should ly undone.
* * * * *

"Sic extortion and taxation
Was never seen into this nation.
Taen of the commons of this land,
Of whilk some is left waste liand,
Because few may sic charges beir;
Mony has whips now in their hand
That wont to have baith jak and speir."

Again the poet complains of wasteful extravagance:—

"Now we have mair, as is weill kend,
Nor our forebears had to spend,
But far less at the year's end;
And never has ane merrie day."

Wonderfully like, too, an echo of the voice of John Knox from the previous century. It is taken from his "Treatise on Fasting," issued in 1565.

"What reverence is had to God's messengers, and what respect unto the poor, that now so multiply within this realm (that the like hath seldom been seen)? Though we will cease, the stones will cry, and condemn us; and yet what superfluity, what vanity, what feasting, riotous banqueting have been, and yet are used in court, country, and towns, although the tongues of men dare not speak, yet we think the purses of some do feel, and in their manner complain.

"Let us consider what God craveth of us, but especially let Earls, Lords, Barons, Burgesses, and Artificers consider by what means their substances are increased. It is not enough to justify us before God that civil laws cannot accuse us. Nay, brethren, the eyes of our God pierce deeper than the laws of men can stretch. The law of man cannot convince the Earl, the Lord, the Baron, or Gentleman for the oppression of the poor labourers of the ground, for his defence is ready: I may do with mine own as best pleaseth me. The merchant is just enough in his own conceit if before men he cannot be convicted of theft and deceit. The artificer or craftsman thinketh himself free before God, albeit that he neither work sufficient stuff nor yet sell it for reasonable price. The world is evil, saith he, and how can men live if they do not as others do? And thus doth every man lean upon the iniquity of another, and thinketh himself sufficiently excused when that he meeteth craft with craft, and repulseth back violence either with deceit or else with open injury."

The Reformer and the Minstrel each in his own way bewailed the same evils as characteristic of his own age.

Among the annual merrymakings of the period in Dumfries were two days' horse races, for which the Town Council pro-

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vided several prizes in the form of silver bells and silver cups; in October there was the riding—more properly the "redding" or clearing—of the marches, when the Town Council, the Incorporated Trades, and Burgesses generally encompassed the far-extending town lands with much state, and the people held high holiday; and they were enjoined by Act of Parliament to hold twice in the year a wappenshaw for practice in the use of fire arms, the Siller Gun, which James VI. had presented to the Trades, and which now hangs in the Town Hall, being shot for on such occasions. "Promiscuous dancing" is included in a list of minor vices to which the Rev. John Blackader found the parishioners of Troqueer addicted, especially on occasion of marriages. A more questionable form of amusement, and one which shews the rough spirit of the time, was that which took place on the annual sort of gala-day in the burgh school. On Fastern's Eve, that being the 6th of April, there was in the school an exhibition of cock-fighting, the pupils supplying the birds and "gentlemen of note" coming to share the entertainment. In accounts connected with the education of Sir Robert Grierson of Lag (the "Auld Sir Robert" of Redgauntlet and the Covenanters' persecution) there occur entries of contributions for this sport.

From what may be called the personal and social aspects of the time, let us turn to the legal or political aspect, and see what was the system of local government which existed and how it was worked. The circumstance which strikes one most forcibly in reading the chronicles of the town at this time is the great power which was possessed by the Town Council and the extraordinary variety of subjects in regard to which it was exercised. That power was shared in matters affecting public morality by the Kirk Session, which, in regard to a certain class of cases, had the power of inflicting fines or imprisonment, but which more frequently called upon the civil power to undertake the trial and punishment of offenders. These two bodies, jointly or severally, exercised an almost uncontrolled authority in the departments both of trade and morality, which stopped short only of the power to inflict capital punishment. The law of the country was in a very rude state. The liberty of the subject was a doctrine which might be known to the statute-book, but it received little practical recognition. Travelling was a laborious, tedious, and expensive process; so that it was next to impossible for most suitors to bring their case under the review of a higher tribunal; and neither the purity nor the justice of the decisions of these courts of appeal was to be altogether depended upon. The Court of Session had been established; but as yet it concerned itself only with civil business. Two Justiciary Judges had been appointed, who made a circuit of the kingdom for the trial of important criminal cases. But the Privy

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Council retained in its own hands the power to try all such cases; and we know from the black record of the persecution that that court could be made, under despotic influences, to exhibit all the vices of the Star Chamber and the High Commission Court.

The Town Council of this period exercised along with the magistrates the powers of judges. It was in the main a self-elected body, the Council itself choosing those who should take the place of the members whose turn it was to retire; but it included the Deacons of the seven Incorporated Trades, who had something of a representative character. The magistrates at least would receive a salary. They continued to do so until some time after the passing of the Municipal Reform Act of 1833. And we shall see later on that the strict opinions with regard to the expenditure of public money with which we are now familiar did not then obtain.

It is well known that at the time of which I speak, and indeed until a recent date, no one could follow any trade in the town, or could engage in any kind of business, unless he was by birth a burgess or had by purchase acquired the privilege; and he must also be a member of one of the guilds or incorporated trades, and therefore have served an apprenticeship. Even when he had complied with these conditions he was by no means at liberty to "do as he liked with his own." Marketing was fenced about with a code of regulations establishing the three offences of forestalling, regrating, and engrossing, which were the subject of a learned paper recently contributed by Sir James Marwick to the Scottish Antiquarian Society. The purport of them was that you must not sell merchandise of any kind except in the public market, within the hours officially appointed for the holding of the market, and at the particular cross or other spot appointed for the sale of the article in which you dealt; that you must not buy with the purpose of selling over again at a profit, at least in that market or within four miles of it; and you must not buy large quantities with the purpose of forming what would now be called a corner and so raising the price say of meal by an artificial scarcity. To sell outwith the market was to forestall; to buy for re-sale was to re-grate; to buy for the purpose of holding up was to engross; and these were all punishable offences. The Town Council also had a right of pre-emption over goods brought to market, and they frequently, from considerations of public convenience, bought large quantities of such things as meal and fish, which were afterwards retailed to the community. The price at which different commodities were to be sold was arbitrarily fixed by the Council. I have made reference to the excise of bread and the excise of ale. On other occasions they ordained that candles should be sold at 4s 6d Scots money for "ilk pund Scots weight," and French wines at five groats a pint. They exercised a close supervision of the

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public-houses, and by local enactment anticipated and even out-did Forbes Mackenzie, ordering the houses to be closed altogether on Sundays and at ten o'clock on week nights. The national legislature was equally advanced on the temperance platform. An Act passed in 1661 enjoined Justices to be diligent in putting into execution the Acts "for the punishing of all persons found guilty of the sin of drunkenness or excessive drinking, especially under the names of healths, or haunting taverns or ale-houses after ten of the clock at night, or at any time of the day except in time of travel, or for ordinary refreshments." The municipal Act was indeed practically a repetition of the general statute, embodied in the local records probably as a means of publishing it. The vice of intemperance and that of profane swearing seem to have been characteristic of all classes, not excepting the clergy, if we may judge from the terms of another statute of the same year.—(Read Act 19 of the Scottish Parliament held at Edinburgh in January, 1661-2.).

An Act of Council passed late in the century disqualified any person who made or sold intoxicating liquor from acting as Provost; in the eighteenth century the probibition was extended to all offices of the magistracy.

Along with the Kirk Session, the Town Council was largely occupied in trying persons who took part in drunken brawls. They were, moreover, believers in that sound maxim that "Prevention is better than cure;" but their way of putting their faith into practice was repugnant in some particulars to modern ideas. Thus, they argued that these brawls frequently arose out of festive and social meetings; and therefore, striking as they would no doubt think at the root of the matter, they passed a law strictly limiting the attendance at marriages, baptisms, and funerals under pain of fine or imprisonment; and they also fixed a limit within which the expense of entertainments on such occasions should be restricted. In this again they were echoing the legislature.—(Read Act 14 of the third Scottish Parliament of King Charles II., September 13, 1681—"Act restraining the exorbitant expense of marriages, baptisms, and burials.").

The Town Council and Kirk Session not only framed stringent laws for the regulation of the drink trade, but they were vigilant in seeing that they were observed. The modern police force was then represented only by the town officers, who had other duties to discharge; and the civic rulers undertook in this matter to lend them voluntary assistance. Eight members of Council were specially told off, in committees of two, to keep a watch upon the public-houses in the four quarters of the town: and a like number of members of Kirk Session were appointed to attend at the gates to the town on the afternoon of market days and make a note of any persons who were seen under the influence of liquor, with instructions to have them apprehended

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if they could procure the services of an officer. The Town Council added to its other onerous duties the charge of the burgh school, taught, I think, in the Tolbooth, and they required all burgesses who were able to pay the fees to send their children there. But here again that spirit of monopoly prevailed, for they imposed a heavy fine upon all "pettie dominies" who should teach children in other schools; a power this which in the hands of a School Board might be fatal to adventure schools. As showing the state of education at the time, and also affording some indication of the qualifications of the councillors for the many duties they assumed, it is interesting to note that at the date of the first minute of Council, 1623, thirteen members out of twenty-four, or a majority of the whole, were unable to sign their names.

The members of the Council, with all their zeal for temperance, by no means set an example of abstinence; and, as I have said, they were not restrained by any punctilious scruples about the propriety of spending public money on their own entertainment. Their drink bill, at least on all occasions which could be called public, was paid out of the public purse. They had wine or ale before going to the court, the council, or the kirk. They must have relaxed in their own favour the stringency of the infant Forbes Mackenzie. They drank when they had business of any kind to transact with outsiders, and when any distinguished person was made a burgess; and on such other occasions as the anniversary of the King's birthday or the annual election. Their drink and feasting bill from March, 1670, to October, 1673, amounted in Scots money to £797. Reduced to sterling coin, of which Scots was only one-twelfth the value, this amounted to the less extravagant sum of £66; but even that was a very large figure when we remember the low wages of the time and the high purchasing power of money. It was equal to a labourer's wages for five years. A labourer then received between 5s and 6s sterling weekly. A leg of mutton could be bought for 8d or 10d, and a dozen eggs for 1½d. By expenses such as these the town's patrimony was consumed, until it had to become in our own days a suitor to the Crown for a gift of Kingholm and Hannahfield, which were once but a small portion of its own estate.

The Kirk Session, like the more secular body, showed a strong disposition to interfere in private affairs. It could impose civil penalties, and it sometimes offered to support the action of the secular authorities with ecclesiastical censures, as in the case of enforcing the licensing laws. This would be no light matter at a time when ecclesiastical censures might involve the shame of a public rebuke from the pulpit and exposure in sackcloth before the whole congregation. The duties of the Session were so many and so onerous that meetings were held

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twice a week. In addition to the cases now commonly dealt with by such bodies, it was largely occupied in trying persons accused of circulating scandal, of intemperance, and of Sabbath-breaking. On one occasion a piper applied to the Session for liberty to follow his vocation in the town; but the members would seem to have been rigid anti-instrumentalists, for they advised the poor wight to "betake himself to some more honest and lawful way of living."

It was not only trespasses against the moral law, breaches of the King's peace, or offences against the lives or property of the King's lieges that were visited with pains and penalties. The efforts of our rulers were directed to securing both uniformity and regularity in public worship. All persons who failed to attend the parish church were subjected to a fine. The inhabitants of Kelton seem to have been sinners above other men in this respect. The minister was instructed to call over their names from the pulpit every Sabbath, and absentees were fined six shillings. These measures were directed not only against the openly indifferent and ungodly, but also in an especial manner against Roman Catholics; and still more severe measures were adopted to prevent the practice of their religion by those who adhered to that proscribed sect. It is to the honour of our country that they shed no blood in endeavouring to suppress Romanism; but until ideas of toleration had leavened public policy they adopted measures sufficiently harsh and intolerant to justify Milton's sarcasm that new Presbyter was but old Priest writ large. Roman Catholics, including the Earl of Nithsdale and Lord Herries, both residents in this district, the one at Caerlaverock, the other at Terregles, were proclaimed "excommunicated rebels;" and the Privy Council deprived Lord Nithsdale of the paternal right of superintending the education of his son. Numerous persons, chiefly women, were apprehended at the instance of the Kirk Session for hearing mass, and were taken to Edinburgh, where the Privy Council sentenced them to imprisonment; and the same tribunal had before them a luckless pair who had had the hardihood to get a Roman Catholic priest to marry them, the ceremony being performed for greater secrecy in the fields near Lincluden after nightfall. Blackader of Troqueer was greatly exercised over the tenacity with which Mr and Mrs Maxwell of Mabie and residents on their estate adhered to the ancient faith, and the obstinacy with which they refused to attend the parish church. After years of ineffectual dealing with them the Presbytery of Dumfries passed sentence of excommunication. The laird quailed before the storm, but "Lady Mabie" was firm, and Blackader publicly and solemnly delivered her and eight others over to Satan in pursuance of the sentence. If he was stern with others, he was himself of the stuff of which martyrs are

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made. A few years later the changes brought about by the restoration made his own church a proscribed sect, and he became an exile and a prisoner for conscience sake.

Besides fine and imprisonment, modes of punishment peculiar to the time were then in use, and some of them were quaintly appropriate to the nature of the offences. Thus a scandal monger was exposed in public with the branks, a wooden muzzle, upon her tongue; and a vixen was shaven at the market cross. More common forms of chastisement were the placing of culprits in the jougs, an iron collar which was fastened to every market cross and church door, or in the pillory. The latter was a savage punishment, the neck of the person being enclosed in a wooden collar at a height which just allowed him to touch the ground with his toes and consequently caused the weight of his body to rest on the chin and back part of the head. Scourgings were also resorted to, and as an additional disgrace the delinquent was often carted through the town. An instrument of punishment that was commonly in use in Britain at this time was the ducking stool. A strong chair was fixed to the end of a movable plank and suspended over the river or a pool of water; and by elevating the other end of the plank the victim (generally a scolding or drunken woman) was immersed as often as the sentence required. The ducking stool, however, was more of an English than a Scotch institution; and it does not seem to have been established in Dumfries.

The power of imposing the punishment of death was restricted in ordinary times to the Privy Council and the Circuit Court. Trial at the latter was by judge and jury. The judges were not always trained lawyers. There were two justiciary judges; but the courts seem to have been more frequently presided over by a number of landed proprietors, to whom a commission for the purpose was issued by the Privy Council. The Earl of Buccleuch and other members of the Scott family figure in these commissions. The trials at these courts were chiefly for cattle lifting and theft, both of which offences were punished with death. The common mode of execution was by hanging, but sometimes the criminal was allowed the less degrading death of drowning in the Nith. A more revolting form of death, that of burning, was reserved for those whose crimes were viewed with special horror. Such were the unfortunate creatures to whom the dark superstition of the time ascribed powers of witchcraft. Belief in the possession of magical powers by persons who might have incurred the displeasure of their neighbours was universal at this time. It was not confined to the ignorant and the degraded; but was shared by the most learned and exalted in the land, and none were more zealous in the discovery and persecution of reputed

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witches than the ministers of the church. Kirk Sessions were turned into inquisitorial courts, and invitations were addressed from the pulpits to any who might be possessed of information that would aid in convicting suspected persons to make it known to the church court, that it might be communicated to the secular authorities. Again referring to "The Gentle Shepherd," we have an indication of the powers and practices with which the popular imagination credited its objects in the soliloquy of Bauldy when he is going to consult the witch upon the prospects of his courtship:—

"She can o'ercast the nicht and cloud the mune,
And mak' the de'ils obedient to her crune:
At midnight oor, o'er the kirkyard she raves,
An' howks unchristened weans oot o' their graves;
Boils up their livers in a warlock's pow;
Rins withershins aboot the hemlock lowe, [from west to east]
And seven times does her prayers backward pray,
Till Plotcock comes wi' lumps o' Lapland clay,
Mixt wi' the venom o' black tades and snakes.
O' this, unsonsy pictures aft she makes
O' ony ane she hates—and gars expire
Wi' slaw an' racking pains afore a fire,
Stuck fou o' preens, the devilish pictures melt;
The pain, by fouk they represent, is felt."

Numerous charms and incantations were used by the people to protect themselves and their cattle from the arts of witches. A favourite charm was the wood of the rowan-tree, a slip of which was often worn on the person and tied to the tails of cows or hung over their head in the byre. A pin made of it would also be placed above the door of the dwelling, and sometimes the tree itself would be planted beside the door. The sprinkling of blood was also considered effective, as we learn from the lilt which Hogg, in "The Brownie o' Bodesbeck," puts into the mouth of the weird visitor that so much alarmed the family at Riskinhope:—

"There's neither blood nor rown-tree pin;
At open doors the dogs go in."

A hill at Locharbriggs was believed to be a favourite place of assembly for the witches, who doubtless would proceed to it in proper fashion, riding upon a broomstick. If the superstition had expended itself in such absurd fancies and frivolous practices, it would have been a theme only for amusement. But it forms the subject of one of the darkest chapters in our national annals. The imaginary crime of witchcraft was the object of numerous prosecutions, and was often visited with sentence of death. In 1569 Sir William Stewart, the Lyon King at Arms, was burned to death at St Andrews by sentence of the Regent Moray. One of the most tragic events that ever

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occurred in Dumfries was the execution, just a hundred years later, of nine reputed witches, who were tried at one assize, and condemned to be strangled and their bodies afterwards burned. It does not appear that torture was resorted to in order to extort a confession of guilt from these unhappy creatures; but the same object was sometimes gained by the rigours of a lengthened imprisonment before trial. One poor woman, against whom sufficient evidence was not forthcoming, was imprisoned at Kirkcudbright, near the close of the seventeenth century, for two years, until she prayed her persecutors to end her sufferings by death; and her melancholy request was granted, on the strength of a confession thus obtained, by a commission appointed by the Privy Council. It is sad to note how tenacious of life this cruel and debasing superstition was. The last trial for witchcraft before the Justiciary Court in Scotland took place at Dumfries in 1790, when the accused was burned in the cheek with a hot iron and banished for life. But it projected its baneful shadow even into the nineteenth century, for in the year 1805 the Steward-Depute of Kirkcudbright sentenced a person accused of pretending to powers of witchcraft to imprisonment for a year and repeated exposure in the jougs.

During the time covered by our narrative the country passed through a civil war, and "the bridge port" for a time bore grim memorials in the form of the heads of "rebels," as the Covenanters were styled. The Committee of Estates recruited an army for operations against Charles, and required all citizens to contribute for its support. A committee entrusted with the carrying out of these objects in Dumfriesshire, as well as other parts, sat generally at the Kirkcudbrightshire village of Lauriston, then called Cullenoch, but certain "substantious" burgesses of the town were deputed by the committee to receive contributions, and they sat in the Town Hall for that purpose for a portion of every lawful day during part of the years 1640 and 1641. The contributions were not altogether voluntary, but were enforced where necessary by poinding and sale; and people were required to bring not only money of the realm, which was somewhat scarce, but also articles of silver and gold, for which they were promised a money equivalent when the war should be over. A regiment recruited in the south, and placed under command of Lord Kirkcudbright, was also billeted for some time in the town. Some of the actual campaigning took place in the neighbourhood. Caerlaverock was the stronghold of the Royalist family of Maxwell, and it was reduced after a month's siege by the Parliamentary General, Home.

But I shall not pursue the subject of the war, the general history of which is foreign to our subject. Our hasty survey has helped to show that our ancestors of the seventeenth century lived under a system oppressive and inquisitorial, and

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that in many respects their lot was a hard one; but it was brightened too by humble pleasures, and they were not exempt from the little vanities and weaknesses of their twentieth century descendants. And when we feel disposed too strongly to commisserate their lot we must reflect that it was amid those hard conditions that the heroes of the Covenants were reared.

24th April, 1903.

Chairman—Mr JAMES BARBOUR, Vice-President.

EXHIBIT.—Stone axe found on Grange Farm, Dalbeattie, by Mr James Biggar.

I.—TRANSLATIONS OF NARRATIVES, CHIEFLY CONTEMPORARY, OF THE DEATH OF COMYN, AND OTHER DOCUMENTS RELATING TO DUMFRIES AND GALLOWAY.

By Dr E. J. CHINNOCK.

MATTHEW OF WESTMINSTER'S ACCOUNT.

Translation of an extract from Matthew of Westminster's "Flores Historiarum." Matthew was a contemporary of Bruce, whose Chronicle concludes with the year 1307.

"After all these things had thus been brought to conclusion, a new war arises again in Scotland. For the Earl of Carrik, Robert de Brus, collects, at first secretly, afterwards openly, some of the nobles of Scotland, saying to them:—'You know how this kingdom belongs to me by the hereditary law of succession, and how this nation had proposed to crown my father king, but was defrauded of its desire by the craft of the King of England. If therefore you will crown me king I will fight your battles and will free this kingdom and nation from English servitude.' This he said, and forthwith many of the perjured agreed. But when he asked John Comyn, a very noble soldier and powerful man, whether he would also agree to it, he distinctly replied that he would not, and says:—'Since all nations know that the King of England has conquered our land and nation four times, and that all soldiers as well as clergy have sworn faith and homage to him for the present and for the future, far be this from me. I will never certainly

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agree to, 'lest I perfure myself.' Bruce persuades, Comyn dissuades, Bruce threatens, Comyn is aghast, and Bruce having drawn his sword, struck the unarmed soldier on the head, who tried to wrest the sword from the hands of his assailant, and he would have cast him down beneath himself (for he was a very strong man), but the traitor's attendants ran up and stabbed him with their swords, freeing their master. But the Lord John escaped as well as he could to the altar. Robert followed him, and as he refused to agree, the man, impious and cruel, sacrificed a pious victim. This was done in the Church of the Minor Friars at Dumfries."

SIR THOMAS GRAY'S NARRATIVE.

The Rev. John Leland was the earliest of British antiquaries. He lived in the reign of Henry VIII. In his "Collectanea" he translated certain portions of a MS. copy of Gray's "Scalacronica." On page 542 occurs the following translation:— "Robert de Bruse, counte of Carrik, that bare himself very bold of his kinsmen in Scotland, trusting to wynne his title of the corone of Scotland, caussid John Comyn, by sending to hym his 2 bretherne to meete with hym at the Gray Freres at Dunfres to speke with hym. And wen he cam thyther, Bruse told hym hys mynd and bad hym 'other take his enheritance of Carrik and help me to be King of Scotland, or let me have thyme, and I wyl help the to be king.' But John Comyn not consenting to this was slayn, and his uncle also, that strake Bruse afore such a blow, that if he had not been harnessid, he had slayn hym." Sir Thomas Gray of Heton was a leading warrior in the English armies of Edward I. and II. He was the ancestor of Earl Grey and Sir Edward Grey. Being taken prisoner by the Scots, he was sent to Edinburgh, where he employed his time in writing a history of the time, which he called "Scalacronica," the Ladder of History. A ladder was the device on his own coat-of-arms. The book is composed in the Norman French of the period, and requires considerable knowledge to understand. The only MS. existing is in the library of Corpus Christi College, Cambridge. It was edited by Joseph Stevenson, and printed and published by him for the Maitland Club, Edinburgh. I have translated Gray's account of the death of Comyn:

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"At this same time Robert de Bruis, earl of Carrik, who bore himself boldly of his kinsmen and allies, trusting to prove his right to challenge the succession to the realm of Scotland, in the year of grace, 1306, 29th of January, sent his two brothers, Thomas and Neil, from Loghmaben to Dalscuentoun to John Comyn, begging him to be willing to meet him at Dromfres, in the Minor Friars, that they might be able to converse. He had arranged with his two brothers aforesaid that on their journey they should kill the said John Comyne. The which were received in such a friendly manner by the said John Comyne that they could not consent to do him any harm; but they agreed that their brother should himself do his best. The said John Comyn, who was thinking no evil, betook himself with the two brothers of the said Robert de Bruys to Dromfres to speak with him. They came to the Friars, where he found the said Robert, who came to meet him. So he led him to the high altar. The two brothers of the said Robert spoke to him privately. 'Sir,' said they, 'he gave us such a handsome reception, and with such large gifts, and trusted us so much by so open a countenance, that in no manner were we able to do him harm.' 'See,' said he, 'you have well discharged your duty; leave me to manage.' He took the said John Comyn, and they approached the altar. 'Sir,' then said the said Robert de Bruis to the said John Comyn, 'this land of Scotland is entirely subdued into servitude by the English through the default of the leader, who allows his own right and the freedom of the realm to be lost. Choose one of two ways; either take my inheritance, and help me to become king, or give me yours. So I will help you to become king; for you are of his blood who lost the crown. Or I will take it, who claim it by succession from my ancestors, who claimed the right to have it, but who were debarred by the votes. For now is the time, in the old-age of this English King.' Then said the said John Comyne, 'I will certainly never act falsely to my English lord in what has been entrusted to me on oath and homage in anything which can be imputed to me as treason.' 'No,' said Robert de Bruys to him, 'I had another hope in you, by promise of you and yours; but you will reveal it to the King by your letters. Wherefore, if you live, I cannot achieve my wish. You shall have your reward.' So he struck him with his dagger; others cut him down in the midst of

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the church before the altar. A knight, his uncle, who was present, struck the said Robert de Bruys with a sword on the breast. But as he was armed it did not wound him. The uncle was killed there."

THE NARRATIVE OF THE CHRONICLER OF LANERCOST.

The Chronicle of Lanercost was written by a Minor Friar of Carlisle, attached to the Abbey of Lanercost, in Cumberland. He was a contemporary of Bruce. There is only one MS. of it existing. Stevenson says:—"It forms one of the treasures of the Cottonian collection in the British Museum." It was printed and published for the Maitland Club, Edinburgh, and edited by Joseph Stevenson, the editor of Gray's "Scalacronica."

Translation:—"In the same year, on the 10th of February, to wit, on the feast of the Holy Scholastic Virgin (Feb. 10, 1306), the lord Robert Bruse, earl of Carrike, with sedition and in guile sent for the lord John Comyn to come and speak with him at the Minor Friars of Dumfrese. And when he had come, he killed him in the church of the Friars, and the lord Robert Cumyn, his uncle. And afterwards he took the castles of Scotland and their garrisons, and on the Annunciation of the Blessed Virgin next following (25th March, 1306), he was made King of Scotland at Scone, and many of the greater and less men of the land adhered to him."

TRANSLATION OF EXTRACT FROM HEMINGBURGH'S CHRONICLE.

"Christopher de Seton, who had married a sister of the new King named Mary, and was an Englishman, was captured in the Castle of Lochdor, as were afterwards his wife and many others. The King ordered him to be taken to Dunfrees, where he had killed a soldier, and there to be drawn, hanged, and beheaded. His two brothers and all others who had agreed to and taken part in the death of the lord John Comyn had the same sentence. And this was by the special order of the King. But the King placed Christopher's wife in the monastery of Thixtell in Lyndesay, and he placed the new King's daughter in the monastery of Wotton. And our lord the King gave to lord Edmund de Malolacu the manor of Sethon in Wythebystrand, which was Christopher's, and his other lands which he had in Northumberland the King gave to lord William de Latymer."

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TRANSLATION OF EXTRACT FROM THE CHRONICLE OF LANERCOST.

"They hanged those who had given advice and assistance in the foresaid conspiracy to make him king; and they caused the greater of them first to be drawn at the feet of horses, and afterwards hanged them. Among whom were Christopher de Setone Englishman, who had married a sister of the often-said Robert, and John and Humfrid, brothers of the said Christopher, and some others with them."

TRANSLATION OF EXTRACT FROM SIR THOMAS GRAY'S "SCALACRONICA," P. 131.

"Thomas, earl of Lancaster, and Humfray de Bouhun, earl of Hereford, who had passed the mountains of Scotland, besieged the castle of Kyndromy in Mar and took it. In which castle was found Christopher de Setoun with his wife, the sister of Robert de Bruys, who as an English renegade was sent to Dunfres, and there hung, drawn, and beheaded; where he had before helped to kill a knight, the viscount of the country, representing the King of England."

TRANSLATION OF SECOND EXTRACT FROM GRAY.

"Robert de Bruys formed a great plan and sent his two brothers, Thomas and Alexander, towards Niddisdale, and the vale of Anande, in order to levy the requisitions from the people. Where they were surprised by the English and taken, and led by the King's order to Cardvil, and there hung, drawn, and beheaded."

I have now translated all the extant accounts of the assassination of John Comyn, which were written during 100 years after the event. The contemporaries were Walter of Hemingburgh, Matthew of Westminster, the Chronicler of Lanercost, and Sir Thomas Gray. The last named was, like Bruce and Comyn, a Norman knight. I have also appended Barbour's account published 70 years after the event, and John of Fordun's account published about 80 years after the event. It seems to me that Hemingburgh, supplemented by Gray, gives the most reliable account. I am trying to trace the *first* account of the Kirkpatrick episode, but at present I have not found it. At any rate, no author within 100 years has anything about it.

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ADDITIONAL NOTE.

I have consulted the Chronicle of John of Fordun, who is recognised by all historical students as the best authority on this period of the History of Scotland from the Scottish point of view. He was a friar of Aberdeen, and wrote about eighty years after the death of Comyn. He is believed to have been acquainted with John Barbour, Archdeacon of Aberdeen, the author of "The Bruce." Fordun's account does not seem to throw much discredit on that of Hemingburgh. It must be remembered that eighty years intervened between him and his English predecessor, and that there is absolutely no contemporary record by a Scotsman. On referring to the Dictionary of National Biography I see that Sheriff Aeneas Mackay thinks that the account given by Hemingburgh is probably the most to be depended upon.

TRANSLATION OF EXTRACT FROM JOHN OF FORDUN'S CHRONICLE OF THE SCOTTISH NATION.

"In the same year, after the aforesaid Robert had returned home from the King of England, no less marvellously than by divine grace, a day is agreed upon between him and the aforesaid John to meet together at Dumfries; and both parties proceed to the aforesaid place. John Comyn is upbraided for his treachery and troth belied. He forthwith replies, 'You lie.' A mortal wound is inflicted upon the evil-speaker in the church of the Friars, and the wounded man is laid behind the altar by the friars. He is asked by those who stand around him whether he can live. He straightway himself answers, 'I can.' His foes hearing this give him a second wound; and thus on the 10th of February he is withdrawn from this light."

Since writing the above I have been looking into Barbour's "Bruce," and I think that his account should accompany that of Fordun. Everyone knows that John Barbour is next to Geoffrey Chaucer, the greatest of old English authors. His "Bruce" is the Epic of Scotland, written for the glorification of the national hero. It was published in 1375, about ten years before Fordun's Chronicle. I have extracted from the poem what is said about the death of Comyn:—

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"So fell it in samyn tid,
That at Dumfres, rycht thar besid,
Schyr Jhone the Comyn soiornying maid;
The Brus lap on, and thiddir raid;
And thocht, for-owtyn mar letting,
For to gwyt hym his discoueryng.
Thiddir he raid, but langer let,
And with Schyr Jhone the Comyn met,
In the freris, at the hye awter,
And schawyt him, with lauchand cher,
The Endentur; syne with a knyff
Rycht in that sted, hym reft the lyff.
Schyr Edmund Cumyn, als was slayn,
And othir also off mekill mayn.
And nocht for thi yeit sum men sayis,
At that debat fell othir wayis:
But quhat sa euyr maid the debate,
Thar—throuch he deyt, weill I wat.
He mysdyd thar gretly, but wer
That gave na gyrth to the awter.
Therefor sa hard myscheiff him fell,
That ik herd neuir in romanys tell
Off man so hard sted as wes he,
That efterwart com to sic boute."

So far as I know at present, the only accounts thereof written within 100 years of the event are Hemingburgh's, Matthew of Westminster's, Barbour's, and Fordun's. All the other incidents related seem to be accretions entirely legendary, and each of us according to his temperament is at liberty to believe as much or as little of them as he pleases. If anything can be shown to have contemporary evidence for it, it may be taken as authentic. I have never met in England, Scotland, or Ireland a single individual who was not an admirer of the Bruce of Bannockburn, the liberator of Scotland; but though all intelligent men admire King Robert they are not obliged to disbelieve anything because it may seem to be to the discredit of the hero. The poet in the extract distinctly says that his hero did wrong, and what Barbour thought and said we are at liberty to think and say.

In the passage from Barbour there is a mistake in the name of John Comyn's brother. Three MSS. have *Edmund*, two MSS. *Edward*. The right name was *Robert*. There is only one difficult word *gryth*, which means *sanctuary*. The line means "That respected not the sanctuary of the altar."

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TRIVETH'S ACCOUNT OF THE DEATH OF COMYN.

Nicolas Triveth was the prior of the London Dominicans. He was a contemporary of King Robert the Bruce. He wrote "Annales Sex Regum Angliae," the chronicle of Six Kings of England, from Stephen to Edward I. He was as highly esteemed on the Continent as in Britain.

Translation:—"In the same year, the 10th of February, Robert de Brus, aspiring to the throne of Scotland, in a sacrilegious manner killed the noble man John Comin, in the church of the Minor Friars at the town of Dumfreis, in the castle of which the justiciaries of the King of England were then sitting, because he refused to agree with his treacherous faction."

THE "I'LL MAK' SICKER" EPISODE.

The statement that Roger Kirkpatrick completed the assassination of the Red Comyn is supported by no contemporary authority, and relies entirely upon oral tradition. The only Scottish historian of the 14th century, John of Fordun, does not mention it at all. Walter Bower, the author of the "Scoti-chronicon," written in 1447, and the author of the Book of Pluscarden, compiled in 1461, the next historians to Fordun, do mention it. Fordun wrote 85 years after the event, Bower 141, and the author of the Book of Pluscarden 176 years thereafter. Therefore, the first mention of Kirkpatrick's part in the affray occurs nearly a century and a half after the event. Bower says that James Lyndsay, together with Gilpatrick of Kirkpatrick, gave Comyn the finishing stroke. The author of the Book of Pluscarden says James Lyndesay of Kilpatrick, the cousin and very dear friend of the said Robert de Broys, performed the exploit. These are the first two chroniclers to bring in the name of Kirkpatrick at all. The Book of Pluscarden has been erroneously ascribed to Bishop Elphinstone, of Aberdeen; but the author tells us in the preface that he knew Joan of Arc, who died in 1430, while Elphinstone was not born till 1437. Felix Skene, the editor of the printed copy, says that it was probably compiled by a priest named Maurice Buchanan, who had been treasurer to the Dauphiness of France. Of course, both the histories are in Latin.

WYNTOUN'S ACCOUNT.

I append the account given by Androw of Wyntoun, prior of

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the monastery of St. Serfon, Lochleven. He wrote "The Orygynate Cronykil of Scotland," about 1420.

"Fra Lundyn on the fyft day
Till Lochmabane than come thai.
Hys brodyr Edward there he fand,
That thoucht ferly, he tuk on hand
To cum hame sa prevaly.
He tald hys brodyr halyly,
How he chapyd, and all the cas,
How before all hapnyd was.
Sa fell it in the same tyde,
That at Dumfres rycht there besyd
Schyre Jhon the Cumyne his dwelling made.
The Brus lap on, and thiddyr rade.
Thaire togyddyr as they mete,
But gret delay, or langere lete,
In the Freris at the hey autere
He schawyd hym with hevy chere
Hys indenture. Than wyth a knyff
He revyd him in that sted the lyff.
Quhat that efftyr this Brus Robert
In all his tyme dyde efftyrwart
The Archedene off Abbyrdene
In Bruys hys Bok has gert be sene
Mare wysly tretyde in to wryt,
Than I can thynk wyth all my wyt."

From Book III., chapter 18.

The "mak' siccar" episode seems to have been founded on oral tradition. It does not appear in any writer, I believe, till the middle of the 15th century, 150 years after the event, and those historians who mention it give no authority for it. I will consult Nisbet's Heraldry, if I can, and see what he says about the date when the Kirkpatrick crest of arm and dagger, with the motto "I'se mak' siccar," were first used, and the reason why Lyon King of Arms gave authority to the family to use it.

TRIVETH'S ACCOUNT OF THE EXECUTION OF SETON.

Translation:—"After this, the castle of Lochdor was taken, in which was found Christopher de Setone, brother-in-law of Robert de Brus, when, since he was not a Scot, but an Englishman, the King ordered to be taken to Dumfries, where he had killed a certain soldier of the King's party; and there he was compelled to undergo his trial, was drawn, hanged, and finally

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beheaded. But he placed Christopher's wife and the daughter of Robert de Brus in different nunneries." (*Monalium monasterium*—monastery of nuns. *Monale*—nun.)

EXTRACTS RELATING TO DUMFRIES AND GALLOWAY FROM JOHN OF FORDUN'S CHRONICA GENTIS SCOTORUM.

I.—Page 300 of W. F. Skene's Edition. A.D 1264.

When the news of the death of Hako, the King of the Norwegians, reached King Alexander he quickly gathered a strong army, and prepared to set out in his fleet to the Isle of Man. But the King of Man hearing thereof was panic-stricken, and sent his messengers to the King to say if a truce were granted him he would come into his presence in Scotland. The King, however, did not swerve from his purpose nor relax his preparations for departure; but having sent him a safe conduct to himself, quickly collected his army, and led it in the direction of the Isle of Man. He arrived at the town of Dumfries, where the same petty King met him, and became the vassal of the King of Scotland, doing him homage for his petty kingdom, to hold it of him for ever, under this condition, that if the King of the Norwegians for the time being should presume to molest him he should have for himself and his for all time to come a safe refuge in Scotland, and that the petty King of Man himself should provide for his lord the King of Scotland, as often as he should need them, ten pirate galleys, namely, five of twenty-four oars and other five of twelve oars.

II.—Page 342. A.D. 1306.

In the same year Thomas and Alexander de Bruce, brothers of the aforesaid King, while hastening towards Carrick by another route were taken at Loch Ryan, and were beheaded at Carlisle. And so all those who departed from the King in the same year were either deprived of life, or, being captured, were confined in prison.

III.—Page 345. A.D. 1308.

In the same year, on the feast of St. Peter and St. Paul (29th June), Donald of the Isles, having collected an imposing number of foot, arrived at the river Dee. Edward de Bruce met him near the river Dee, and defeated Donald himself and all his Gallewegians, and in the conflict slew a certain soldier

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(or knight) named Roland, together with many nobles of Galloway. And he caught the said Donald, their leader, fleeing. And after this he burnt up the island.

IV.—Page 346. A.D. 1312.

In the same year the castles of Buth, Dumfries, and Dalswinton, with many other fortalices, are taken with the strong hand and levelled with the earth.

V.—Page 356. A.D. 1332.

In the same year, on the 15th of December, John Randolph, earl of Murray, Archibald Douglas, and Simon Fraser, with a few other nobles, having met in the town of Moffat, came by night to the town of Annan. There they had a sudden encounter with Edward de Balliol; but they quickly put the said Edward to flight. John de Mowbray, Henry de Balliol, and Walter Comyn, with many others, were killed in the conflict itself, and Edward himself, with a few men, with difficulty escaped. In the same place Alexander de Bruce was taken by the earl of Murray and rescued from death.

VI.—Page 383.

In the year 1383, the castle of Lochmaben was taken by the Scots, namely, Earl William de Douglas and Archibald, and destroyed on the fourth day of the month of February.

EXTRACTS FROM THE BOOK OF PLUSCARDENSIS, WRITTEN IN 1461 BY MAURICE BUCHANAN.

I.—Book 8, chapter 10 (Edition Felix Skene). A.D. 1307.

In the first place Edward of Carnarvon caused all the magnates of Scotland to be summoned before him, both clergy and laity, at Dumfries to render him homage and to take the oath of fealty.

II.—Book 10, Chapter 22.

In the year of the Lord, 1415, the town of Penrith was burnt down by the Scots, and the town of Dumfries by the English.

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II.—BURIAL MOUND AT BOGRIE; ARROW-HEADS OF FLINT AND STONE WHORLS FROM TOWNHEAD OF CLOSEBURN; AND FLAT STONES FOUND IN CONNECTION WITH OLD HEARTHS AT MOAT OF LOCHRUTTON.

By Mr ROBERT SERVICE.

Mr Service gave several interesting notes relating to the above, giving a full description of the Burial Mound at Bogrie, and exhibiting the urn found therein. Exhibits of the other articles were also made, and the notes, which were highly interesting, formed the basis of a valuable discussion, relating chiefly to the supposed age of the cairns in Closeburn, in which the arrow-heads and whorls were found.

III.—THE PRE-HISTORIC RED DEER OF SOLWAY. By Mr ROBERT SERVICE, M.B.O.U.

This interesting address was accompanied by several exhibits, which included pair of antlers on shield, sent by Mr C. Watson, Annan; left antler, belonging to the Observatory collection; fragment found in the Urr, also from the Observatory; an imperfect pair, right antler, left, and the "burr" of the other, found in the bed of the Lochar, and two imperfect antlers, belonging to the Society's museum. Among other points, Mr Service referred to the fact that the Red Deer was the animal which came most frequently under the notice of the pre-historic student. He also described the places in the Solway area where the remains were most frequently found, and discussed the question as to the probable period in pre-historic ages when these animals roved the earth.

22nd May, 1903.

Chairman—Dr SEMPLE.

EXHIBITS.—By Mr R. Service, Bronze Axe, found at Trohoughton; specimen of Ocean Pipe Fish; specimen of Angler Fish. The Pipe Fish, which had not previously been recorded for the Solway proper, was got at Glencaple; and the Angler Fish was caught at Newabbey.

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MERKLAND CROSS. By Mr GEORGE IRVING, Corbridge-on-Tyne.

(Another interesting paper on the Rere Cross by Mr Irving is not published on account of the pressure of matter.)

This fine floriated cross of the latter half of the fifteenth century stands at Merkland, on the east side of the Kirtle, about 550 yards from Woodhouse Tower, in the parish of Kirkpatrick-Fleming. It is almost on the line of the old Roman road that led up Annandale. The floriated cross at the top of the shaft is 2 feet 4 inches high, the shaft 7 feet 10 inches, and the base about 2 feet 10 inches long by 16 inches high above ground. The lower end of the shaft is 13 inches broad by 7 inches thick and slightly tapered and chamfered to the top. It is made of the red sandstone of the district, and must have been very carefully selected to have stood the storms of four centuries. There is no inscription upon it, but there are good grounds for believing that it was erected in memory of John, Master of Maxwell, Caerlaverock and Maines. In July, 1484, the Duke of Albany and James, ninth and last Earl of Douglas, invaded Scotland from England to wrest the crown from James III. They marched into Dumfriesshire and reached Hoddom unopposed, and encamped at Birrenswark—possibly on the old Roman camp. A small part of the force pushed on to Lochmaben, announcing their intention to deposit offerings on the High Altar of the Church of Bruce's Burgh. The Master of Maxwell, Johnstone of Johnstone, Murray of Cockpeel (one of the ancestors of the present Earl of Mansfield), Crichton of Sanquhar (an ancestor of the Marquis of Bute), Carruthers of Holmains, and Charteris of Amisfield, led the Dumfriesians, and met the invaders near Lochmaben. The battle is said to have lasted all day; but when Musgrave and his men at Birrenswark saw his friends retreating, hotly pursued by Maxwell and his men, they fled to the south. The last part of the skirmish seems to have taken place on the south and east side of the Kirtle. Douglas was captured, but Albany, with the remnant of his followers, escaped during the night into Cumberland.

The death of Maxwell is recorded in an old manuscript:—"The Duke of Albanie and the Earl of Douglas, being rebells to King James the Fourth, brought ane army out of Ingland upon

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the Magdallen day, being the 22d of July, 1484, till Lochmaben, and after the destroying of Annandale, being passing back againe to Ingland was fochen by the said Master of Maxwell at Kirtell, suppleing his father's place accompanied by the Barrones of Nithsdaille and Annandaille, where the lairds of Drumlanerick and Mouswald were slain with sundry other gentlemen. But yet the victorie remained with Scotland, for the Duke of Albanie was chased in England, and the Douglas taken by ane brother of the Laird of Ross, Kirkpatrick; for the whilk service he gott the lands of Kirkmichael, and ane great number of the army was either taken or slain; and though the Scott syde was glad of the victory, yett they were so sorrowful for the loss of the Master of Maxwell, their chiftane; for in mean tyme ther was ane Scottish limmar, named Gask, whose kinsman the Master of Maxwell hade caused hang be justice, seeing he was Steuart of Annandalle. This Gask in revenge of his wicked intentions thought it ane meit tyme and sticked the said Master behind his back, with ane lang whinger, as he was leaning and reposing himselfe on his sword hilt, being very evele hurt and wounded in the field before, and sun died ther."

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Vol. XVII., Part 4.

THE TRANSACTIONS

AND

JOURNAL OF PROCEEDINGS

OF THE

DUMFRIESSHIRE AND GALLOWAY

Natural History and Antiquarian Society

FOUNDED NOVEMBER, 1862.

SESSION 1903-1904.

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CONTENTS.

SESSION 1903-4.

	Page.
Annual Meeting	313
Trees—*Professor Scott-Elliot*	314
Edward I. at Sweetheart Abbey—*E. J. Chinnock, LL.D.*	318
How the Royal Burgh of Annan built a Bridge—*James Barbour, F.S.A. (Scot.)*	320
Diurnal and Nocturnal Raptorial Birds of the Solway Area—*Robert Service, M.B.O.U.*	327
The Snowdrop—*S. Arnott, F.R.H.S.*	339
Meteorological Observations for 1903—*Rev. W. Andson*...	350
The Weather Conditions of 1903 in Relation to Health—*Dr J. Maxwell Ross*	355
Laws of Fines for the Presbytery of Dumfries—*Rev. R. W. Weir* ...	358
Scottish Words found in Old English Writers—*E. J. Chinnock, LL.D.*	358
Geological Notes—*James Watt*	359
Vestiges of the Castle of Dumfries—*James Barbour, F.S.A. (Scot.)* ...	362
Field Meeting at Castledykes...	365

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PROCEEDINGS AND TRANSACTIONS

OF THE

DUMFRIESSHIRE AND GALLOWAY

NATURAL HISTORY & ANTIQUARIAN SOCIETY.

SESSION 1903-4.

16th October, 1903.

ANNUAL MEETING.

Chairman—Mr G. F. Scott-Elliot, M.A., F.L.S., &c.

New Member—Mr John Bell-Irving, Viaduct Hotel, Carlisle.

The Secretary and Treasurer read his annual report, which stated that 11 deaths and resignations had taken place, and that four new members had been admitted. The deficit on the publication of "Birrens and Its Antiquities," to reduce which Mr James Barbour had given £5, was carried to the debit of ordinary account, which showed a balance to credit of £45 2s 3d. The report was adopted, and a vote of thanks passed to Mr Barbour.

In accordance with the recommendation of Council, the following were appointed office-bearers for the session: President. Professor G. F. Scott-Elliot; Vice-Presidents, Mr R. Murray, Mr R. Service, Mr J. Barbour, and Dr J. Maxwell Ross; other Members of Council, Rev. J. Cairns, Dr Martin, Mr J. S. Thomson, Mr J. Davidson, Dr Semple, Mr S. Arnott, Mr W.

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Dickie, Mr J. Tocher, Miss Hannay, Miss Cresswell; Librarians and Curators of Museum, Rev. W. Andson and Mr James Lennox; Curators of Herbarium, Professor Scott-Elliot and Miss Hannay; Secretary and Treasurer, Mr J. A. Moodie.

The general adoption of a tentative agreement between the Society and the Managing Committee of the Ewart Public Library, as submitted by the Council, was agreed to, with the condition that means be adopted by which members would be enabled to borrow the books and periodicals belonging to the Society.

TREES. By The PRESIDENT.

The word is a very ancient one, and characteristic of the Scandinavian group of families—Arbor of the Roman and Bann of the German. Trees may be regarded as the highest kind of vegetation, and they are the most highly developed type of plant. Here, however, there is a difficulty. How are we to judge development? In some senses wheat, or lilies, or other flowers might be considered on a better level of development. There are, however, two respects in which trees surpass all other plants. (1) They show a far greater division of labour and a specialisation of work unknown in lower organisms. (2) A tree is much more than any ordinary plant. It is like an empire, under whose shadow myriads of other organisms, animal as well as vegetable, are able to find shelter and profitable employment.

The way in which trees have developed is a specially interesting study. In the primordial ocean, seaweeds were probably the first to develop. They show extremely little specialisation, and there is very little difference in the structure of the cells composing the seaweed. One cell is much like another. They were also confined to wet places or water. Next probably come fungi and bacteria, whose office in the world is an important, though generally unpopular, one. To destroy the worn-out and unfit so that better types may take their places.

On dry land, in my own view, lichens or crottles were the first kind of vegetation and settled themselves on dry rocks or earth. Mosses came next, and amongst them there are tree-like forms. Yet all mosses are very small. They differ radically

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from flowering plants in their being refreshed by the descending water of the rain. They cannot, like trees, raise water as sap within themselves.

The first appearance of anything like a tree seems to have been in old red sandstone times, when gigantic clubmosses belonging to the same class as our little clubmosses appeared. These were, however, very clumsy and uneconomical, considered as trees. Note especially how wasteful as regards the catching of light. Especially note the monotonous regularity both of foliage and branching. Yet types of this sort of tree are found not merely in clubmosses; many conifers show it, especially monkey-puzzle, Araucaria, Thuja, and some Australian veronicas. The weak point consists in the stem being covered by the leaf bases, and in the small size and simple shape of the leaves.

A very early type of plant is that called by botanists the "rosette," very familiar to us in the daisy and dandelion. This is found in the clubmoss group—Phylloglossum, in ferns, many bulbous plants, and in fact most of the monocotyledons. The stem is extremely short, the leaf bases cover the stem, but the leaves themselves are often large. In our common British dandelions and plantains, the circle of leaves is always close to the soil. Yet many of them live several years. In the dandelion the root regularly dies away, and contracts, or shortens so that the tuft or rosette is kept low. Plantagos have special roots which grow at a slant downwards. These roots contract or shorten, and haul down the rosette of leaves, so that they are kept in the most favourable position (close to the ground).

But, suppose this did not happen, let us imagine the stem to grow regularly every year, what would happen? The palm type of tree would be formed. A column slender and stately with a rosette or crown of leaves at the top. We find many trees of this type.

Tree fern, the cycad or sagopalm, and the tree palms. There are even dicotyledons of this type, but they are rare, and why? It is not the best type because the trunk is still covered by the leaf bases, and the area shaded is just the diameter of the one rosette or tuft of leaves. Thus the shade area depends on the size of the leaves, and cannot increase. The area shaded by a young plant will be very nearly the same as that covered by a veteran. Full advantage is not taken of its long standing.

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The raphia palm has leaves 50 to 66 feet long and 36 feet broad, probably the largest leaves known, but even here you see the area shaded is only about 132 feet in diameter, which is not at all remarkable.

The regular tree type has been obtained by a simple development; by introducing internodes between the leaf bases, and by continuing to modify and alter the shape of the leaves. Thus a single column, as soon as it has lifted itself above the reach of grazing animals, can rapidly push out branches horizontally, and form a dense crown of foliage. Thus, once it has got a base for development, it can utilise its long standing in the fullest way possible.

Such a tree may be compared to an empire of living individuals. Not only so, but the life works of these individuals are as different as possible. I am on holiday just now, and I am not going to give a botanical lecture, but I should like for a moment to show how wonderfully the different offices are filled. The living units, the small cell with its protoplasm, are in their youth almost alike. Yet, as they develop and specialise, each takes its characteristic shape as it gets into its own particular line of work. The outside ones become cork, others in the bark produce the tannin, of which 4 per cent. is enough to prevent the growth of fungi. Thus the rabbit and the roe deer are kept off. Through an oak tree during five months of summer a current of water is always passing, entering by the roots and passing off by the leaves. About 250,000 lbs. weight of water passes through it in five months. The cells which absorb this water, the cells in the woody trunk, and the leaves show the most extraordinary finish in their adaptation to it. The pressure inside some of these cells is probably 200 lbs. to the square inch. Then again, the leaves regularly manufacture the sugar and other material. An oak leaf will have some 2,000,000 pores or stomata through which the carbonic acid hurries in. For every 1-500th of a pound of wood substance 1,000,000 litres of air has been freed of CO_2.

The sunlight falling on the tree is absorbed by the little green chlorophyll bodies in the leaf. In the trunk there are the wonderful storage arrangements by which sugars, fats, oils, everything made by the leaves, is retained within the stem for next year's buds.

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Again the wind adaptations. Think of the stresses and strains in a forest tree in a gale of wind. Look at the heights of an Eucalyptus amygdalus, 456 feet, 120 feet above St. Paul's; mammoth tree, 426 feet; silver fir, 225; spruce, 180; Scotch fir, larch, and cypress, 159; yew, 45 feet. Even sunflowers may be 17 feet high in America. All this is arranged by the specialisation of the myriads of living and dead organisms which go to make up the tree.

Generally, it seems as if any one of these organisms had to do exactly what was best for the good of the whole tree, according to the position in which it has been placed. In which case our own societies and civilisations appear to be distinctly on an inferior level. Yet these little living units are often called upon to become something quite different. Supposing you cut into the tree. Those cells that are wounded are at once cut off from the rest. The nearest living cells are sacrificed; they are changed into cork, stoppered with gum, or sometimes with indiarubber, and the wound is promptly healed. A rampart of dead bodies is built up over the spot. But it is not only in themselves, but also as sheltering organisms that trees are important. On the bark of a tree we find seaweeds—pleurococcus. On the branches lichens and mosses. Most people consider these to be useless except to themselves. That is not so. Those low forms of life occupy spaces where light would be wasted, and their dead material falls eventually to the ground and manures it. They add to the valuable leaf mould regularly formed. The fungi on the ground are even more important, for it is by their fine insinuating and dissolving threads that all this dead material is broken up, modified and prepared for absorption by the trees again. The ferns, hyacinths, anemonies, the brambles, and rasps in the wood, all add to the efficiency of the wood which shelters them. The leaves are gradually broken up, and practically nothing once formed is ever lost.

Finally such woods usually fall under the axe of the lumberer. The wood itself is an essential; it is necessary for human civilisation. Seven acres of forest are required for a day's issue of one New York paper. The end may, we hope, justify the destruction. Then upon the site of this wood homesteads and fields of wheat, and oats, and barley are farmed.

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20th November, 1903.

Chairman—Mr R. SERVICE, V.P.

EXHIBITS.—By Mr G. Irving, printed rules, dated 7th Oct., 1788, for the House of Correction in Dumfries. From Mr Service, shrubs in full flower, viz., Laurustinus, or strawberry tree, from garden at Portmary; common whin; Arbutus unedo.

I.—EDWARD I. AT SWEETHEART ABBEY. EXCERPT FROM A LETTER TO POPE BONIFACE VII. FROM ROBERT OF WINCHILSEY, ARCHBISHOP OF CANTERBURY. Dated Oxford, Oct. 8, 1300. Extracted from Annales Londoniensis; edited from the Lambeth MS. by Bishop Stubbs.

By Dr CHINNOCK.

"When at last, after careful enquiry, I heard that the same lord the King, with his army, returning towards the castle of Carlaverock, which he had previously taken, in Scotland, had pitched his camp near the new abbey of Sweetheart (Dulce Cor, or Douzquer), in Galloway, preferring to expose myself, my men, and my possession to danger rather than thus any longer to languish in such remote regions in a certain manner uninhabited, beyond my own diocese and province, I lurked in certain secret places near the sea, which divides England from Galloway, and taking the opportunity of the ebb of the tide, under the guidance of those who had a perfect knowledge where to cross, I made the passage in the course of four tides, with the horses and their trappings, there being great danger in entering and departing, not more by reason of the depth of the water than by reason of the shore and the quick-sands. On the next Friday after the feast of St. Bartholomew the apostle, which was already at last concluded, I came, as if unexpectedly, to the said King, who was then at dinner in the midst of his army. And because he said he could not find any leisure on that day, he informed me late on that day through two of the greater earls who were then attending him that he would be kind enough to hear me on the morrow, to wit, the Sabbath following. Therefore, the Sabbath day itself arriving, in the presence of the very devout young lord Edward, son of my lord

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the King, in an assembly of a great number of earls, barons, and other knights of his army in attendance on my said lord the King, having read aloud your foresaid mandate transmitted to me, I presented to the same the letter of your holy paternity directed to my foresaid lord the King, having obtained the authority of the same. My lord the King himself received this letter respectfully, and caused it to be read publicly in the presence of all, and to be clearly explained in the French tongue. When this had been patiently heard by each and all, I encouraged myself, and urged in every way I could and knew, that he would obey respectfully in all things your exhortations in regard to what was set forth in the said letter. Afterwards I withdrew from him with my clergy at his command, while he deliberated on these things with his said chief men. At last he recalled me and answered me in the presence of the same, through an intermediary, in the following wise: 'My lord archbishop, you have made on the part of our superior and reverend father, the lord the Pope, a certain admonition touching the state and law of the kingdom of Scotland; but because the custom of the kingdom of England is that in matters touching the state of the same kingdom the counsel of all is required, whom the matter touches, and the present business of the kingdom of Scotland touches the state and law of the kingdom of England, and there are many bishops, earls, barons, and other chief men of the kingdom absent, who are not and have not been in this army, whom the said business touches, in whose absence it will not be possible to answer our said most high father or you finally; on this account our lord the King intends, upon the matters contained in the letter of the said father, as far as he shall be able conveniently, to consult in a body those who are absent as well as those who are now present, and to treat with the same with greater deliberation and to send a reply to the same most high Pontiff through his own ambassadors upon these things concerning the common counsel of the same.' This same answer indeed thus made in his presence and in his name my lord the King ratified and also expressly approved."

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II.—How the Royal Burgh of Annan Built a Bridge. By Mr James Barbour, F.S.A. (Scot.).

The river Annan, at the town of that name, although a considerable stream, was not, so far as is known, spanned with a bridge until the beginning of the eighteenth century. For passage there was a ford, and the town owned a boat, which was farmed out as part of the burgh revenues. At fairs, ford-women attended, and bore over on their shoulders persons preferring their assistance. The science of bridge building appears to have reached a low level at the Border, as the first Annan bridge, built between 1700 and 1705, required to be rebuilt in 1720, and the latter gave place in 1824 to the existing fabric. This sketch is concerned with the earliest bridge, or rather the municipal management of the scheme, for the meagre and imperfect records of the Town Council and Burgh Court, the only source of information available, furnish no indication of the design—of the length, width, number of arches, or other details; there is just enough to prove that it was a stone-built structure. The circumstances out of which the scheme originated are obscure. The subject is introduced abruptly in a Burgh Court minute of 12th May, 1700, where it is said that several funds were set apart for the work. Their nature is not stated, but about this time a special item of income must have fallen to the town likely to be devoted to the bridge. Annan formally agreed to the project of the Commission of Royal Burghs to farm the customs and foreign excise of Scotland, and to her share of the profit therefrom was probably due the rise of the bridge scheme, just as Dumfries Midsteeple owed its existence to the same speculation. In proceeding to deal with the management of the scheme it will be convenient in the first place to introduce briefly the chief actors concerned; and the most potent personage in respect of social and political position and of influence relative to the bridge work is My Lord William, second Earl of Annandale, Provost of the burgh. Sir William Frazer, in "The Annandale Book of the Johnstones," represents the Earl, afterwards Marquis, as the greatest of his family, and as doing the country service in many high offices of State which he held. His lordship's connection with the burgh of Annan is not, however, alluded to; nevertheless the Earl was the occupant of the civic chair in the reign of six sovereigns. On 14th October, 1684, being then hardly 21 years of age, his lordship, when present at the Council meeting, was chosen Provost, and his characteristic signature, "Annandale," is appended to the minute. From this time, with the exception of two years' occupancy of his son, Lord James Johnstone, the Earl continued in office from year to year until his death in 1721. At home he was a Commissioner of Supply, Steward of the

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Stewartry of Annandale, and patron of the Church of Annan, as well as Provost of the burgh. It might be conceived, considering the time and energy absorbed by the numerous important State offices he held, that the Earl's provostship would be of an honorary nature. The records prove the case to be otherwise. This most active and forceful nobleman dominated everything—the elections, and all the affairs and business of the town, acting himself or through his chamberlain. Frequently the election of the Council was deferred on his account, as in the following instance:—"The bailies, treasurer, dean, and Council are continued as formerly till such time as My Lord Annandale, Provost, be present at a new election or appoint one under His Lordship's hand when a new election should be, and no new Councillor be added without His Lordship's advice." In regard to other business, there are enactments that "the customs are to be uplifted by the bailies and treasurer till My Lord Annandale, Provost, ordains the said customs to be rouped, or be present himself, or his advice be taken thereanent; that the income from the common good is not to be disposed upon except My Lord Annandale, Provost, his consent be given and precepts under His Lordship's hand before disposing thereupon; and that persons who have had the common goods in time by past, with the Magistrates and their clerk, are to attend the Provost at Lochwood when called, and account therefor." The Earl, it should be explained, subsequently by a bond acquired the right of dealing with the customs of the burgh. William Whyte, who resided at Poldean, near Moffat, is the Earl's chamberlain. Second to the Provost is "Mr Matthias Partis of Tallentyre, Esquire, eldest bailie," an Englishman from Cumberland. Admitted a burgess of the burgh of Annan 1st October, 1694, and designated "merchant in Tallentyre," he was elected a Councillor 28th May, 1697, and advanced the same day to be senior bailie. With him was another Englishman, "Master John Woosley, merchant of London," who was admitted burgess 26th May, 1698, added to the Council 29th October the same year, and elected junior bailie 5th October, 1700. In partnership these gentlemen started a mercantile business, chiefly as importers of tobacco, at Annan, and appear to have been considered men of substance. John Johnstone of Gallabanks and John Irving of Gulliland, well-known Annan men, are bailies, and James Bryden is treasurer.

Passing to the history of the bridge, the minute of the Burgh Court of 12th May, 1700, already mentioned, has reference to the registration in the Court books of a contract, of which the tenor, abbreviated, follows:—

"It is contracted and agreed betwixt a noble and potent Earl, William Earl of Annandale and Hartfell, etc., Provost of Annan, with express advice and consent of the bailies, whole

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Town Council, and community of the burgh, on the one part, and Mr Matthias Partis of Tallentyre on the other part, That is to say that forasmuch as the building of a bridge at the said town, over the river of Annan, is found may prove very advantageous to the place, and seeing several funds are designed for carrying on so good a work, which yet is thought not sufficient, Therefor it is agreed that the said Mr Matthias Partis shall immediately fall to work and employ, contract, and agree with workmen for building a bridge over the said river at the place designed, which is commonly called Tommies brae, and shall furnish all manner of materials, and lay out and disburse what money shall be contracted until the perfecting of the whole works. And in regard at present no liquid sum can be condescended upon, Therefore the said noble Earl, with the consent of the magistrates, council, and community, by these presents bind and oblige them that they shall give right and commission to the said Mr Matthias Partis to receive and uplift all manner of funds that may fall to the town for carrying on the said work. And further, that where the said funds fall short in the necessary expense They shall in ample manner assign to the said Matthias Partis the whole common good, town lands, and boat with customs, to be possessed by the said Matthias Partis until he be paid what sums of money he shall be found to disburse necessarily in the said work with the just and true interest thereof, etc. Written by William Whyte, servitor to the said noble Earl."

By this deed the senior bailie of the burgh was created trustee of the bridge affairs, with power to uplift and apply the funds, and to furnish any shortage, for the repayment of which the town's revenues were pledged to him in security. The contract proved hazardous to the town, as within five months of its registration the firm of Matthias Partis and John Woosley had become discredited through certain tobaccos imported to Annan by the firm being arrested for payment of dues. Thereafter the Earl of Annandale, as patron of the church of Annan, in granting a year's vacant stipend towards the building of the bridge, did not entrust Partis with the fund; John Irving, one of the bailies, was engaged to uplift the stipend and pay the same to John Lodiore, the builder of the bridge. It appears the church was vacant in 1700, 1701, and 1702. The stipend of each year was granted by the Earl towards the bridge work. The manse and outbuildings connected therewith were possessed by Partis and Woosley as tobacco stores. On 19th May, 1700, William Whyte gave in at the Burgh Court a commission by the Earl of Annandale for clearing of the accounts betwixt Mr Matthias Partis and the burgh anent the bridge, and whereby the said Earl declares his resolution to furnish what money may be wanting for the completion of the bridge, on the town's security.

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The council accordingly "impegnorate" and engage the customs and meadows belonging to the burgh, until the Earl of Annandale be fully and completely reimbursed and paid. The Earl in this way possessed himself of Partis' contract, and the common good was from this time let from year to year by or with consent of the Earl's chamberlain.

The minute of the Burgh Court, dated 31st May, 1701, presents a clear view of the circumstances of the case of Partis anent the bridge, and shows the risk attending contracts with Englishmen, who were foreigners before the Union. Commission was given in, according to the minute, for the Earl of Annandale and Hartfell, etc., one of the Lords of His Majesty's most honourable Privy Council, and Steward of the Stewartry of Annandale:—"Forasmuch as it being represented to us by the bailies, council, and community of the burgh of Annan That Mr Matthias Partis and John Woosley, merchants in the said burgh, have uplifted and received these several years past the whole common good and money of the said burgh, which by indenture and contract they were obliged to employ in building a stone bridge over the river of Annan, and the said Mr Matthias Partis and Mr John Woosley, being Englishmen, are like to fail in the performing of their part of the said contract, and may as foreigners easily transport their effects and persons without giving count and reckoning, Therefore these give warrant and commission as we by these presents as one of His Majesty's Privy Council of this kingdom, and as Steward of Annandale, commissionate and appoint William Whyte, our servitor, to join with the present bailies of the said burgh, and state account of charge and discharge betwixt the town and the said Mr Partis and Woosley, and if any balance be found due to take sufficient security for payment of the same to us towards the perfecting of the said bridge, by us to be applied, and if Partis and Woosley fail these presents authorise the said William Whyte with the bailies to secure by arrestment all effects belonging to them, and detain the same within the burgh until count and payment be made. In witness whereof these presents (written by the said William Whyte) are subscribed at Lochwood this thirtieth day of May, 1701 years, before these witnesses, etc."

A burgess ticket on skin, bearing date 17th July, 1701, survives, although the minute from which it is extracted is lost. It is in favour of John Whyte, assistant to Tobio Bachup, builder in Alloway, whose advice might be sought in connection with the building of the bridge. Bachup subsequently contracted to erect the Midsteeple of Dumfries. As an example of the form in use at the time, a transcript of the ticket follows:—

"Annan Decimo Septimo die July anno domini Millesimo Septingentes imo and uno. In presentia honorabilium virorum

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Gulielmi Marchionis de Annandaill and Consulis, Matthiæ Partis of Tallentyre, Joannis Johnston de Galabanks, Joannis Irving de Gulielands et Magistri Joannes Woosly Bailivorum, Gulielmi Hair decani Gildæ, Jacobi Brydon Thesaurary et caeterorum Concily dicti burghi. Quo Die Jounis Whytè servitor Tobio Bachup in Alloway fabro murario admissus et Receptus fuit in municipen et fractrem Gildæ dicti burgi propter singularem favorem et Benevolentiam quibus dicti magistratus illum amplectuntur præstito per eundem Juramento S.D.N. Regi et dicto burgo solito. Extractum de liberis concily Dicti burgi per me scribam ejusdem subscribentem. "Geo. Blaire."

The Provost had been advanced to the dignity of Marquis, as the ticket bears, and in the records he is styled "High and mighty prince, William Marquis of Annandale," etc.

The Burgh Court books are much occupied with the registration of claims against the estate of Partis and Woosley. Great delay takes place in arriving at a settlement, notwithstanding frequent protestations that the tobaccos are in danger of perishing, being stored in bad cellars; but after the lapse of more than a year, at the end of 1702, an arrangement is come to. John Hallyburton, advocate, probably a descendant of the early Edinburgh banker of that name, and Clement Nicholson and Isaac Tallowfield, Englishmen, are authorised to roup the tobaccos lying at Annan in several cellars and in the manse and buildings belonging thereto, they undertaking to make payment to other creditors—to William Graham of Mossknowe, collector of customs, the sum of £40, he to give discharge in full of all claims from the beginning of the world to this day; to John Irving, surveyor, £140; and to Bailie John Irving, £100 worth of tobacco to satisfy himself and several others. It does not appear that anything was found to be owing to the bridge fund.

Money was scarce, and several times, contrary to use and wont, the customs, at the instance of the Marquis of Annandale, who, it is noted, has right by contract thereto, were rouped for ready money, 3d November, 1702:—"The bailies and Council, taking into consideration the matter of the bridge, and finding that since the first day of June last the whole workmen are yet unpaid to this day, except only what has been advanced to them by William Whyte out of the vacant stipend of Annan for meal towards their maintenance this summer, and now winter approaching and several of the said workmen being to go to their several habitations, and that the Marquis of Annandale, his chamberlain, refuses to clear and pay up what is resting to the said workmen, pretending he has no order and warrant so to do, Therefore Mr William Johnstone, commissioner to Parliament, is to apply to the Marchionness of Annandale in my Lord's absence to grant order to pay the workmen for this summer's work, and also for keeping together as many workmen as may be need-

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ful for the winter season, and also to represent that we are convinced the work cannot be perfected at the rate first agreed upon; the town willingly offers any further security they are capable to give; earnestly recommends that a speedy and effectual answer be given."

3d May, 1703.—An Act is passed in favour of the town-clerk in consideration of certain sums advanced by him for paying the workmen, masons, and barrowmen, working at the bridge their wages. The same day certain creditors of Partis and Woosley within the burgh agreed to lend £100 sterling of recovered money to the Council towards the bridge work, the burgh having come greatly in arrear.

1st November, 1703.—George Blain, collector, to receive collections for our bridge, has received from the Magistrates, Council, and community of the burgh of Dumfries the sum of £132 16s 6d Scots for helping to build our bridge, and which sum the said George Blain is to apply towards defraying the expense of the said bridge.

On the 9th of the same month the Marquis of Annandale gifted the vacant stipend of the year 1702, being the last contribution noted in the records, towards the bridge fund.

The let of the customs in November, 1704, provides that if an Act of Privy Council is obtained for an additional custom upon account of the bridge of Annan within the year the benefit is to accrue to the taxman; and in November, 1705, bridge custom is included in the let for the first time, not, however, by authority of the Privy Council, but by an Act of the Town Council. The bridge work had at last, it is presumed, reached completion.

The conditions of let of the customs vary according to circumstances, but always exhibit Border influence. In 1683 it is provided that the taxman shall pay, without defalcation, be it peace or war; next year the expression is, without defalcation either for peace or yet in time of war. The terms in 1705 are, that in case the prohibition upon linen cloth and cattle prohibiting the importation of them from Scotland into England be continued or allowed, or in case of open war betwixt the said kingdoms, or in case the Act of Council for the bridge customs be suspended by any merchant or others, the taxman shall have allowance therefor. After the Union it is conditioned that in case linen cloth or cattle be stopped from going into that part of Britain formerly called England, or in case of war betwixt this kingdom and any other so as trade be stopped, or should the bridge custom be suspended by any merchant or drover or otherwise, allowance is to be made therefor.

The dues were re-arranged 30th October, 1706, as follows:—"The which day it is statute enacted and ordained That the town and bridge customs of this burgh for the goods after-

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mentioned shall be as follows, viz.:—For each cart-load of goods 12s, each wheel car load 6s, each corded pack of goods 3s, each load of goods 1s 6d, each horse 3s, each score of sheep or lambs 10s, each merchant's horse pack 1s 6d, each foot merchant's pack 6d. Item—All the heritors and wadsetters within the parish of Annan, each one for themselves and families, are to pay yearly for the benefit of the bridge at the custom thereof 12s for the whole year. Item—All tenants and others within the said parish 6s for the whole year. Item—Each bridal 12s, and each burial 12s (Scots money). The present Act is only to take place if My Lord Marquis of Annandale, our present Provost, authorise and approve of the same.

It is not surprising that the Council should hesitate. After imposing bridge dues without authority, they now propose to rate the whole parish. The Provost conserved his own interests and secured immunity from the customs of the burgh for his tenants.

22nd May, 1707.—The which day My Lord Marquis of Annandale, Provost, John and Robert Johnstones, Bailies, and Town Council of the said burgh, being in council convened. For the great and good services done by Mr Lord Marquis to the said burgh, They have enacted and hereby enact that My Lord Marquis' tenants within the parish of Annan shall be free of all custom for what goods they shall bring through the said burgh, and liberties thereof, that are the product of the said Marquis his lands as said is. (Signed) Annandale, etc.

With the Marquis of Annandale is bracketed the town of Dumfries as a recipient of favours. 20th June, 1707.—The which day the bailies and Council of the said burgh, being in council convened, and taking to their consideration the good services done by the good town of Dumfries to our burgh, have enacted and hereby enact that in all time coming the Magistrates, Council, merchants, burgesses, and inhabitants of the said burgh of Dumfries that bears scot and lot within the said burgh, shall only pay the sums after-mentioned as the customs for the town and bridge of the said burgh of Annan, viz.:—For each cart-load of goods 8s, each corded pack 3s, each horse load or fardel 1s 6d (Scots); and that the Magistrates and Town Council of the said burgh of Dumfries, a list whereof is to be given and subscribed yearly by the Magistrates and their clerk, are to be free of all customs, both men and horse, when they come or go end-long the said bridge of Annan in all time coming.

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18th December, 1903.

Chairman—Dr J. MAXWELL ROSS, Vice-President.

THE DIURNAL AND NOCTURNAL RAPTORIAL BIRDS OF THE SOLWAY AREA. By Mr ROBERT SERVICE.

THE EAGLES.

The identity of the species that formerly frequented so many eyries in Solway has been badly mixed up. A century ago there must have been pretty nearly a score of occupied nesting sites in Dumfriesshire and Galloway. Both species were undoubtedly present. Those at the head of Moffatdale and Annandale—some three eyries—may well have been Golden Eagles.

Old David Tweedie, in his day a famous anglers' guide on Tweedside, when interviewed in 1834, when he was in his 83rd year, is said to have stated:—

"That there is not one salmon, or trout, now for 20 that were found in his young days, that everything is changed, saving and excepting the glorious green hills of his native valley, that he perfectly recollects when there were just six pairs of Eagles in Moffat water—the shepherds keeping their numbers down to this mark."

The very last of the resident Dumfriesshire Eagles (and it was a Golden Eagle, for I have seen the specimen) was brought down by a shepherd in a way which, so far as I know, is quite unique. On the farm of Gameshope, near to Loch Skene, one Eagle in particular got so bold as to lift lambs within 20 yards of the herd, a man named Bauldie Hairstanes. He could not stand this, even from an Eagle, which is not to be wondered at, and he used to carry stones in his plaid when going over the hill. One day in April, 1833, this herd was going his rounds, and the Eagle —probably having young in the cliffs above Loch Skene— swooped at the dogs. Bauldie threw a stone, which, very likely more by good luck than good guidance, struck the Eagle and brought it down to the ground, where, with the help of the dogs, it was secured. I question if a similar incident ever happened in this or any other country.

In Galloway Eagles nested till after 1850, and one (which

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Sir H. Maxwell says is a White-tailed Eagle), taken from the nest about that time, was kept in captivity at Cairnsmore House, where it died only a couple of years ago. As I have already said, there is considerable confusion in local records and stories betwixt the two species, and the Osprey has also been confused with them. But the Golden Eagle, judging from specimens in existence, seems to have been by far the commoner. There was some 10 or 12 years ago an old man still alive in Dalmellington who as a youth swam to the islet in Loch Macaterick, and took the eaglets from the eyrie there so far back as 1812.

THE OSPREY.

The picturesque lochs of Galloway lost their finest ornament when the Fishing Eagle left their shores. Beyond any doubt it bred on the islets of Lochs Skerrow and Grannoch, and also on one or other of the Glenhead group of lochs, till about 1860—a year, or maybe two, sooner or later.

The birch tree on an islet on Loch Skerrow was still standing within the last 20 years, and I have spoken to several persons, not much older than myself, who had seen the big, bulky nest the birds built upon it.

Gray made a statement in "Birds of the West of Scotland" (and the same passage also appears in Gray and Anderson's "Birds of Ayrshire and Galloway") that it then had (that was under date of 1870) a frequented eyrie in Wigtownshire. He farther stated that it had then a nesting site in Kirkcudbrightshire. Not long before Gray's death Professor Newton was, I believe, in communication with him as to these statements, but could not obtain, I was told, any confirmatory evidence. The late Captain Clark Kennedy was Mr Gray's informant, and I tried also to get some data from him on the subject, but those who knew that gallant gentleman will not be surprised to hear that I failed. While I have no evidence against these statements of Gray's and Clark Kennedy's, there is considerable doubt that the Osprey really nested in Galloway more than perhaps a couple of years at most subsequent to 1860. I have questioned many persons who knew the lochs well as angling haunts, but I never succeeded in getting any tangible information. At the same time, several anglers have told me of having seen an occasional Osprey during these last thirty years. Of the

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PEREGRINE FALCON

we have still a good many resident birds. Those who are familiar with the Colvend heughs will often have seen the couple, resident on those cliffs, dash out amongst the Herring Gulls there. Pairs are found in summer on several suitable parts of the Galloway coast. I believe there may be 8 to 12 pairs on the shore line. There are as many, perhaps more, on inland sites. In Dumfriesshire it is much scarcer, and there being no shore cliffs, it is confined to the Moffat hills and Upper Nithsdale near the Stewartry boundary. But there is an awful drain, year by year, by the keepers on these birds. It is curious how persistently birds turn up each recurring season to take the place of the slaughtered ones.

At the migration seasons some very fine examples are often got, more particularly in autumn, when "passage falcons" are seen now and then. These are mostly fine, large, dark, beautifully-plumaged birds in the feather of the first autumn.

Altogether, the Peregrine is by no means a rare bird, and is to be noted in most of at least one's longer rambles. On a recent date, when on the wide sands west of Southerness Point, along with some friends, we heard a faint call, that after some discussion we assigned to the Peregrine. But we could not see it anywhere around. The calls being repeated, we located them from skywards, and, putting the binoculars on, we found three specks high in air. We considered the birds to be one old and two young, and we watched them for nearly half an hour go through a pretty set of aerial manœuvres. A systematic search with the glasses will often reveal a Peregrine high in the heavens, and it is a most charming sight to see this finest of all the Falcons pursuing its strong and rapid flight in those wide circles it seems to delight in.

We now come to the Peregrine's miniature, the active and beautiful little

HOBBY.

Up till the last week or two there was only one good record of the Hobby in Solway—a specimen shot on Rockhall in 1866, not in 1867, as Gray has it. The other record I have referred to is a Hobby shot near Carsethorn, and now preserved in the nice little collection of local birds preserved by Mr Robert M'Call there.

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Gray states that Totenham Lee shot two and saw a third on Glenlee in 1853, but I do not care to accept the statement.

We next come to one of the most interesting Raptores on our list,

THE MERLIN.

In the breeding season it is rather local. It nests pretty freely on the Upper Nithsdale moors, but seems scarce and casual elsewhere in Dumfriesshire. In Galloway it is partial to moorlands near the shore during summer. During the autumn months it is a comparatively numerous species, and is then of general distribution throughout Solway. At that time its splendid speed and supreme mastery of the power of flight make it an object of much interest to the field ornithologist.

THE KESTREL

still holds its own wonderfully well, and I verily believe that even gamekeepers are beginning to doubt if a Falcon, after all, may be entirely evil. It is a scheduled species, and well deserves all the protection that can be given it. I have often observed the nests of this bird on the sheep farms of Nithsdale and Annandale, and noticed how in these districts the pellets, or castings, which, as you know, all the Raptorial birds disgorge, being the indigestible parts of their meals, are often largely, and sometimes entirely, composed of the rejectamenta of the Spring Dorbeetle. During the vole plague the Kestrels were augmented in numbers to an enormous extent, and they seemed to suffer similarly, but to a considerably less degree, from the same cause that killed off so many of the Short-eared Owls.

[THE GOSHAWK]

[comes next, and following the admirable method adopted by Mr Harvie Brown, the Goshawk as a Solway species must be kept within "square brackets." The bird is mentioned twice in the "New Statistical Account" as a nesting species on the Ross and Muncraig heughs, near Kirkcudbright. These are at present, or were very recently, both stations of the Peregrine Falcon. The name "Goshawk" used to be often applied to the Peregrine in Galloway, where it is quite a common habit to misname things. Then we have the story first set down by Totenham Lee, jun., to Robert Gray, which I may be allowed to give in the latter

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gentleman's own words, that I quote from "Birds of the West of Scotland," p. 37:—"Within a comparatively recent period I have known the Goshawk to breed in Kirkcudbrightshire, in which district my correspondent, Mr Totenham Lee, jun., who was quite familiar with all the British Birds of Prey, repeatedly saw the birds flying about. Under the observation of that gentleman, a pair of Ravens were turned out of their nest by two Goshawks, who appropriated it to their own use, and a second nest built not far from this locality was situated in a tree." Thus far Gray's narrative, which was penned, or at least published, in 1871. But the incidents described had happened about 18 years previously. At that time Mr Lee was a very young man, and his sporting rambles were under the tutelage of Gilbert Anderson, the keeper on Glenlee, whom I knew well, and who died only last year, almost a nonagenarian. With Anderson I have discussed and rediscussed the Goshawk story over and over again. The birds were Peregrines, or, as old Gilbert preferred to call them, "Game Hawks!" He told me some folks always called the Peregrines "Goshawks," but the real Goshawk he had never seen alive!]

THE SPARROW HAWK.

This is by far the most abundant of all our remaining Birds of Prey, and no other species come so regularly under observation. During the months when the autumn migration is going on this hawk is most in evidence, and it is during that period of very regular and evenly distributed abundance. The word "abundance" is in this connection a comparative term. From the very nature of the case, birds of prey, of any British species, in ordinary circumstances, can never be more than widely scattered points, or in the breeding season, small and very isolated family parties.

During winter, also, but becoming scarcer as the season advances, Sparrow Hawks are not at all uncommon. With the spring migration a sudden accession of numbers takes place, most of the birds passing onwards—northwards or eastwards. As a summer resident the species has become greatly reduced in number, and although a nest is still no rarity, it is not nearly so common as formerly. There can be little question that since the modern form of game preserving set in, now some 70 or 80 years ago, the resident, or breeding, stock of Sparrow Hawks has been destroyed

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outright at least half a dozen times over. The places, or beats, of the birds thus killed are filled again each season by arrivals from other parts of the western range of the species. This process, however, cannot go on for ever, and it is showing signs of coming to an end. Like other members of our fauna, subjected to like cruel treatment, continued persecution is bound to finally banish the Sparrow Hawk.

THE KITE

may have been, and probably was, a resident at one period. But I have never been able to glean a single authentic note on its former existence. It is occasionally reported as seen, the fork in the tail leading sanguine observers to think they have identified it.

THE COMMON BUZZARD,

although not by any means justified in its trivial name, now-a-days, is still happily not rare in the Stewartry. I hardly think it breeds in Dumfriesshire or Wigtownshire, but it does so in several localities in Kirkcudbrightshire. In the south of the county one pair had their nest on a tree in late years, but in the hill country they breed on cliffs. The last time I was in the neighbourhood of Loch Dungeon I saw no fewer than three on the wing at one time, flying in wide circles over the Carlin's Cairn. One was shot in Eskdale a short time ago, and another frequented a locality not more than three miles from this hall most of last winter. Almost every year a few examples are killed during the autumn migration.

THE ROUGH-LEGGED BUZZARD

is a species that, so far at least as Solway is concerned, can only be regarded as a casual winter migrant. We have had in my own experience three immigrations. The first was in the autumn of 1875, just at the start off of the vole plague of 1875-76. There was another in the autumn of 1880, since when, until the present season, I have not heard of it with us. On each of the two first described immigrations from a dozen to a score of specimens were recorded. No doubt as many more were taken and no record made of the fact. Those I saw were most remarkable for the range of colour in the plumage shown by the various examples. Some were very fine dark—almost black—birds, while others were very light. MacGillivray states that one

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he examined that had been shot in Dumfriesshire in 1840 "had a great number of young feathers of a blackish brown colour, and would have been entirely of that tint had the moult been completed." The current immigration, going on at present, promises to be a remarkable one. So far as I have heard, a bird got near Tarff, another on Auchencheyne, and a third shot on Glengaber, are the only local occurrences yet, but they seem to have been seen all over the British Islands, and quite abundantly along the eastern seaboard.

THE HONEY BUZZARD.

In the "Dumfries Courier" of June 11, 1833, I find a paragraph which states:—"A specimen of that very rare and elegant species, the Honey Buzzard, was shot last week at Drumlanrig. . . . The specimen has been added to the collection of Mr Bushnan of this place."

MacGillivray records the same bird.

Mr Richard Bell of Castle O'er, in the course of a valuable paper, entitled "Rare Birds in Eskdale," read at this table on April 17, 1901, stated that a Honey Buzzard was shot by his brother in the year 1850. Robert Gray says, with reference to probably only these two instances, that "specimens have been shot in Dumfriesshire on several occasions."

On 17th January, 1901, Mr Jardine, farmer in Waterside of Troqueer, caught a very beautiful Honey Buzzard by the side of his sheep fold in the dusk of a dark morning. It was kept captive for three weeks, and died. I saw the bird, which was in splendid feather and condition, and it was remarkably tame. It is hard to give a reason for finding this bird here on a date when it should have been away in Africa under the Tropic of Cancer. Winter occurrences are not quite unknown in Britain, and, like the Land Rail, the Blackcap Warbler, and some other migrants, the Honey Buzzard may find no great difficulty in prolonging its stay when circumstances are favourable.

THE HARRIERS

may fittingly be taken together, since none of the three is resident with us now. The Marsh Harrier was probably always a rarity in Solway. The older records treat it as such, and in my own experience I have met with only one individual, and that was from Kirkmichael on 7th May, 1898. On the other hand, the

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Hen Harrier seems to have been quite abundant till shortly after game preserving set in. Even yet an odd bird or two (I heard of one in Kirkbean in October) turns up occasionally, mostly at the migration seasons. There are about half a dozen instances of the occurrence of Montagu's Harrier. One was a specially interesting case, as the bird, a fine female, caught on Cairnsmore of Fleet, had beyond doubt been sitting on eggs. The date was June 15th, 1881.

This brings me to the end of the Diurnal Raptores, and I now turn to the Nocturnal section, beginning with

THE BARN OWL.

Somehow, I always think of this bird in connection with one peculiar habit it has. This is the power of emitting, at extremely infrequent intervals, a most appalling shriek, calculated to lift the hair on the baldest head, if the listener happens to be unaware of the source from whence the frightful scream proceeds. At the dead hour of night, breaking in on the stillness, with a suddenness which is often startling, even to those who have heard it before, this uncanny sound may well give rise to any amount of belief in warlocks and witches. Except for this wild expression of disgust with the world itself, and a few grotesque incoherences in the way of hissings, nasal whistling, and snores, the Barn Owl is voiceless, for, if it hoots at all, it must do so very rarely. Sir W. Jardine, however, states in a footnote to his edition of Selborne that "this species DOES hoot, for I have shot them in the act. They also hiss and scream, but at night, when not alarmed, hooting is the general cry."

Frequenting buildings, new and old, only seldom resorting to hollow trees and rock faces, this species is to most people fully more familiar (in the preserved form) than the three other Owls that are resident with us. Its pretty contrasted colours of pale buff and yellow, with an intricate tracery of delicate greys and browns, and the purity of its white underparts, render it a desirable addition to the orthodox case of "stuffed" birds. Perhaps no other bird figures so often and so prominently as an ornament for the parlour window-sill, or as one of the occupants that gaze with glassy eyes and a never ending stare from the case on the lobby table. Everyone to his, or her, taste. Barbarian habits die out slowly. The stuffing of Barn Owls is a barbarous

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taste, only less vile than that of using this poor bird's skin as the centre-piece of a drawing-room hand-screen. After all, such fate as falls to the lot of those that are "stuffed" is not so ignoble as that of the great army of Barn Owls which annually become victims to the misguided zeal of the game preserver. Not much can really be laid to the charge of any of the Owls, and nothing at all may be truly alleged against this particular species so far as the interests of game, real and supposed, are concerned. The legions of mice, voles, and rats that almost entirely constitute the food of the Barn Owl would surely work havoc incalculable were they not destroyed in the quiet, remorselessly unceasing way that few people, except the vigilant field ornithologist, has any idea of. The three County Councils that preside over the faunal region of Solway never did wiser actions than when they included this and the other Owls in the protected schedules.

The Barn Owl is the most ghost-like of all the Owls in its flight. Let me not be understood as likening the movements of this bird to that of the spirits of darkness in any other than a conventional sense. It hovers, and turns, and quarters its beat on noiseless wings, and the pale colour gleams out against the dark background of the woods, as it flits in and out of the changing and uncertain twilight of the summer evening.

An old and most respectable school of naturalists taught that the innumerable instances of means to definite ends were designed directly by the Creator. A younger, and, let it be said, less reverential, generation insists that Nature herself has evolved all these beautiful designs by the automatic working of natural laws. Of course the argument, well founded as it may be, only puts the First Cause a step farther back.

Amongst these appliances for equipping their owners to take part in the great struggle for life, the feathering and structure of the Owls must surely be reckoned as amongst the most perfect. Examine the exquisite series of fringes along the edges of the feathers. Feel how soft and fluffy is the plumage. Note the largeness of the eyes, adapted for collecting every ray of light. See what a great cavity in the large head is occupied by the ear, wide enough to catch the faintest rustle of the creeping vole in the grass. Look at the powerful talons and the strength of beak, and if your examination has been conducted intelligently you will

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realise what a magnificent engine for a specific purpose is before you.

Barn Owls are not nearly so common with us in Solway as was once the case. Close observers of the bird are agreed that throughout Great Britain this species is decreasing sadly in some parts, while in none is it doing more than holding its own. While persecution by game preservers is, of course, mainly to blame, still a strong agency for its decline will probably be found in some, as yet, mysterious modification of climate. With us, I am pretty certain, there has been a marked withdrawal towards the warmer, sea coast districts, just as it has been with the House Martins.

Now-a-days the Barn Owl is oftenest seen along the cliffy parts of the Galloway shore. Here it frequents the caverns and crannies in the rocks, where nests may be found from April to September. Of late years rats have become far more plentiful than was formerly the case, and these nasty rodents positively swarm along the coast, feeding on mollusks and garbage of all kinds that is so often strewn along the tide line. Late in the gloaming the Barn Owls may often be observed working along the wrack and pouncing down on a rat every here and there. The unfortunate quadruped has barely time to squeak before it is borne off, a dangling corpse, to the nestful of snoring, spluttering youngsters up in the cliff.

The second species of Owl that comes under notice is the

BROWN OWL.

If I were asked to name the voice amongst the birds that we should miss most if birds and their notes were to be entirely eliminated from sight and sound, after the entrancing double note of the Cuckoo, I should unreservedly place that of the Brown Owl. What a grand thing it is to hear the hooting of the Owls repeated, and replied to, from different directions, on a quiet night!

This Owl is our commonest species, and is decidedly increasing. It is one of the protected birds, and, apart from the fact, general public opinion is against its slaughter, while on many estates it is very rigidly ensured against the desire of the keepers to slay it.

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In autumn and spring many migrant Brown Owls pass through our area, amongst which an occasional fine example in the interesting grey phase of plumage may be distinguished. So far as my experience goes, this grey phase of plumage has no representatives with us as breeding birds. They are, I believe, all migrants passing through the district, and are found usually in the late autumn months.

The other day I happened to be reading a novel—an occupation, I am bound to explain, that I very rarely indulge in. The scene of the part I was perusing was laid in Galloway, and the following passage attracted my attention:—"An owl hooted, but presently the bird itself passed close to him with a soft woof of feathers, and a glint of a face like a white mask." Now, the Barn Owl has a white face, but does not hoot; the Brown Owl hoots, and hoots prodigiously, but its face is not white. So there is considerable ambiguity about the exact species. In any case none of our resident Owls emit any sound whatever from their wings in flight. It is absolutely noiseless, although the motion of the air is easily felt as they pass. I have had all the species pass within a foot or two of me, and I have kept all of them, except the Short-eared, in captivity. We should really expect a little more scientific precision of expression from one like Mr Crockett, who is both an M.B.O.U. and a great writer.

THE LONG-EARED OWL

is, I think, the prettiest of all the British Owls. Its more slender form, better carriage, and the distinguishing length of its ear tufts, give it a fine appearance. Coming out well before twilight has ended, and sitting as it does on some quite conspicuous position about the tree tops, or flying in short flights from tree to tree, it is in consequence fully more interesting in these respects than its congeners. While not exactly a gregarious bird, yet there is a strong tendency to a form of company keeping, for in favourable circumstances two, or sometimes three, pairs may be found in tolerably close proximity. Throughout Solway it is quite as numerous as the Brown Owl, but is strictly confined to the woodland districts, and is not found either on the hills or along the cliffs of the shore.

During the migration seasons it is occasionally quite common.

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THE SHORT-EARED OWL.

The status of this species in normal circumstances is that only a pair or two remain to breed with us. Still, they are always present. It must not be forgotten that almost the first good account of the breeding of the Short-eared Owl in Great Britain was given by Sir William Jardine from observations made at the head of the Water of Dryfe, almost 70 years ago. The vole plague of 1875-76 saw a big movement of these Owls, and they were accompanied by Rough-legged Buzzards, while the plague of 1890 and subsequent years brought an altogether marvellous immigration. In Dumfriesshire alone not less than 500 pairs of breeding birds were estimated as present. Probably there were three or four times that number on the vole-infested farms. I have elsewhere told how these grand birds commenced to nest in February, and continued nesting without intermission till September; how 10 and 12 eggs were the usual number in a clutch; and with what avidity and untiring vigilance the voles were pursued during every one of the hours of day and night. It was a never-to-be-forgotten experience to see on mile after mile of the moorlands always a dozen or more of them in sight at once. One farmer of my acquaintance counted 36 sitting in a row on a hillock in Carsphairn on a summer afternoon. The finest sight of all was when at midsummer of 1892 I had a chance of going along the hills at midnight. The night was bright and clear, and very still. The Owls were on all sides, flying like no other birds I ever saw. The voles were scurrying hither and thither, squeaking and rustling as one stepped over and amongst them. The unfeathered owlets had left their nests, and were sitting blinking their eyes and contorting their bodies in groups on almost every little hillock. The parents never troubled to alight amongst their offspring—they simply flew past, and flung the dead voles at their young in the byegoing. It was a weird and impressive bit of bird life, one my poor powers of description cannot do justice to.

As you may remember, the great vole plague came to a very sudden termination, and the destroying angels in the shape of Short-eared Owls died too in hundreds, being picked up everywhere in the last stages of emaciation. "Died of hunger" was the general verdict, but I believe this was quite wrong. Died of

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disease incurred through eating the diseased voles is, I fancy, the true reason .

Lastly,

THE SNOWY OWL.

In every sense of the word, a fine bird indeed. For Solway I have only a couple of authenticated occurrences. Mr Rimmer of Dalawoodie told me he saw one sitting on a tree in the park at Kirkmichael in the winter of 1860-61.

A few years ago a specimen was shot on the Dumfriesshire bank of the Esk. The late Rev. H. A. Macpherson fully informed me of the occurrence in his usual kind way, but at the present moment I have mislaid the note and cannot, therefore, give any further particulars.

19th February, 1904.

Chairman—Mr R. SERVICE, Vice-President.

NEW MEMBER.—Miss M'Connell, Milnhead, Kirkmahoe.

EXHIBIT.—Collection of Rock-forming Minerals, from Professor Burns, Andersonian Institute, Glasgow, who was accorded a hearty vote of thanks.

FAIR MAIDS OF FEBRUARY. THE SNOWDROP: ITS HISTORY, LITERATURE, AND BOTANY. By Mr S. ARNOTT.

In the popular name of the Snowdrops, selected for the title of this paper, there is perpetuated the memory of the procession of maidens who, on the feast of the purification, paid their vows to the Virgin on Candelmas day, a celebration which will be referred to a little later. According to Dr Prior, the still more familiar popular name of "Snowdrop" is not derived, as many suppose, either from the resemblance of the flower to a drop of frozen snow or from its flowering, as a rule, in the time when snow is on the ground. It is probably only the German *Schneetropf*, and originates from the resemblance of the form of the flower to that of an ear-drop or the ornaments which ladies have at various times had suspended from their brooches and

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other articles of jewellery. The botanical name of Galanthus, literally "Milkflower," is derived from *gala*, milk, and *anthos*, a flower—quite an appropriate name, and justified by the colour of the blossom, which is not that of snow, but more akin to that of milk, as may be observed if the Snowdrop is seen in the midst of snow.

HISTORY.

The question of whether the Snowdrop is a plant indigenous to our islands has received some consideration from botanists, but the general opinion is adverse, although Hooker, in the "Student's Flora," says that it is possibly wild in Hertford and Denbigh. It is found, however, practically wild in many places, where it has probably been a survival of old gardens of monastic and other establishments where gardening was in vogue in long past generations.

It is found in Central and Southern Europe from the Pyrenees to the Caucasus, where it is, to all appearance, a native. The Mediterranean regions, the Bosphorus, and the Black Sea, with Asia Minor, appear to be its headquarters, and it is probably there that we may find its original progenitor has appeared.

LITERATURE.

Of course, we cannot tell how long the Snowdrop has been a flower admired by men and women. It has probably been a favourite through all ages, though it is comparatively lately that we have become acquainted with its various forms, and the diversity which exists among them. The earliest known figure of a Snowdrop occurs in a work of L'Obel, named "Stirpium Historia," published in Antwerp in 1576. The figure is that of the common Snowdrop, Galanthus nivalis. The English herbalist, Gerarde, uses the same figure in his work of 1597, and supplements it with a larger one, which is supposed to be a drawing of either Galanthus Imperati, a large form of Galanthus nivalis, or Galanthus plicatus. In 1611 Clusius in his "Historia" gave the same figures, and added the information that the large Snowdrop came to Europe by way of Constantinople. It was thus familiar to the authors of herbals and similar works in early days, and we find it spoken of by Evelyn as the "Snow-flower," while it appeared in other old writers as the lesser "Bulbous Violet."

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Its legendary history is fairly well known to a few interested in the flower; although, one fears, it will hardly be accepted as authentic in these critical days. The more common legend regarding its origin has a few trifling variations, but the following may be considered a good example of the legendary treatment of the origin of the Snowdrop. I have no idea of its antiquity, but it is curious to note regarding its statement that the Snowdrop was not created until after the expulsion from Eden, that John Parkinson, whose "Paradisus" appeared in 1656, gives as its frontispiece an illustration of Adam and Eve in the garden of Eden, and shows in this several plants well known to us, and at least one purely fabulous—the "Vegetable Lamb." He omits, however, the Galanthus, and it is possibly owing to the existence of the legend in his day.

The story runs thus:—After our first parents were driven out of Paradise, Eve, it is said, was mourning over the barren earth, and the driving snow kept falling, to form, as it were, a pall for the earth's funeral after the fall of man. An angel was sent to comfort Eve, and, while bringing her a message of comfort, he caught a flake of falling snow, and, breathing on it, bade it take a form, and bud and blow. Before the snowflake reached the earth it was suddenly transformed into a lovely plant, which Eve prized far more than other flowers she had seen in Paradise, for the angel said to her:—

> "This is an earnest, Eve, to thee,
> That sun and summer soon shall be."

The angel's mission being completed, he took his flight to heaven, but where he had stood on earth there appeared a ring of snowdrops. Another legend, which, by the way, I found in a charming little book for children, called "Alexis and his Flowers," written by Miss Beatrix Cresswell, and prettily illustrated by Miss H. Cresswell, of Nunholm House, Dumfries, gives a different story, but one teaching the same lesson of hope. It tells that Hope was weeping over the death of nature in the cold winter time, and where her tears fell they melted the snow, and snowdrops sprang up; henceforth they have been the flowers of Hope. Trivial as these legends may appear, they are valuable to students of folk-lore, and to all who can appreciate how such simple things as flowers appeal to the higher and deeper thoughts of men and women.

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From its purity and grace the Snowdrop has ever been associated with the virtues ascribed to the Virgin Mary. As such it was dedicated to her, and on the day of the Purification—Candlemas Day—February 2, old style, the image of the Virgin was taken from the altar and Snowdrops placed upon it. The young maidens walked in procession to the churches on that day, clad in white, and the flowers thus acquired the name of "Fair Maids of February," one which is descriptive of the purity, grace, and charming beauty of the Snowdrop as we know it still. In the old metrical rendering of the Church's Calendar of English flowers we find it said that:—

"The Snowdrop, in purest white arraie,
First rears her hedde on Candlemass daie."

and it still remains the appropriate flower for the red letter day of the second of February.

There are few superstitions attached to the Snowdrop, so far as one has been able to discover, the only one appearing to be that it is unlucky to bring a single Snowdrop into a house. This is alleged to be owing to the resemblance of the flower to a shroud.

POETRY.

The older poets leave the "Fair Maids of February" unmentioned in their verses. One cannot but think that this is a witness to the theory that the plant is of comparatively recent introduction to our island. Shakespeare, whose wealth of allusion to plants is remarkably great, makes no mention of it, and when the great Bard of Avon, who was such an observer of such things, says nothing about it, we must expect to see little mention of the Snowdrop for some time after his day. Even in more recent times it was largely left to the minor poets to portray the flower in those words which poesy alone can use with such skill. There are now, however, many references to the Snowdrop by the poets, and one can only touch upon a few of these, as illustrations of the more æsthetic side of our subject, ere we enter upon the more abstruse one of its botanical characters. These are selected more from a desire to give a representative character to the quotations than with a view to discriminate among them from a literary point of view. None of the poets have touched more aptly upon the characteristic thoughts of the Snowdrop than Tennyson, when he tells of his

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white-robed nun, who, on St. Agnes Eve, stands watching, as she says:—

"The shadows of the convent towers
Slant down the snowy sward,
Still creeping with the creeping hours
That lead me to my Lord.

Make Thou my spirit pure and clear
As are the frosty skies,
Or this first Snowdrop of the year
That in my bosom lies."

It seems a little ungrateful to the poet to mention that it is the snowflake, or Leucojum, which is more appropriately the flower of St. Agnes. Then one cannot but rejoice with Tennyson when he gives us the following lines:—

"Many, many welcomes
February fair-maid,
Ever as of old time,
Solitary firstling,
Coming in the cold time,
Prophet of the gay time,
Prophet of the May time,
Prophet of the roses,
Many, many welcomes
February fair-maid!"

With a like note of cheerfulness Lewis Morris has written these lines of the flower:—

"And as I went
Across the lightening fields, upon a bank
I saw a single Snowdrop glance, and bring
Promise of spring."

Bringing us other aspects of the Snowdrop, Wordsworth gives us some references to the flower, among which we may quote two, as representing it in different, yet allied, associations. In the first we have the flower exposed to one of the early storms of the year. The flowers are—

"Frail Snowdrops that together cling,
And nod their helmets, smitten by the wing
Of many a furious whirl-blast sweeping by."

Here is another:—

"Chaste Snowdrop, venturous harbinger of spring,
And pensive monitor of fleeting years."

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One of the most striking references to the flower among the poets is to be found in some lines by Robert Buchanan, who says:—

"Could you understand
One who was wild as if he found a mine
Of golden guineas, when he noticed first
The soft green streaks in a Snowdrop's inner leaves?"

Here is another note—this time by Mrs Browning—and instinct with that feeling which comes to those who have been sufferers themselves. It is:—

"The poor sad Snowdrop—growing between drifts,
Mysterious medium 'twixt the plants and frost,
So faint with winter while so quick with spring,
And doubtful if to thaw itself away
With that snow near it."

Everyone knows the following from Thomson's "Seasons":—

"Fair-handed spring unbosoms every grace;
Throws out the Snowdrop and the Crocus first."

These are only a few among the now numerous references in the poets to the Snowdrop, and one would gladly have culled a few more from a bouquet of such flowers of poesy had it not been that the botany of the flower will require all the further time available. I had intended to illustrate this section of the subject with some living specimens of the leading species of Galanthus, but having to leave home before the flowers were all open, I can only furnish a few imperfect, because not fully developed specimens, and some of these are not yet far enough forward to enable anyone to form a true idea of their characters.

THE BOTANY OF THE SNOWDROP.

While the late Dean Herbert and other botanists did not fail to study the Snowdrop in a systematic way, and the former in his monograph of the "Amaryllideæ" treated of the few plants of the genus known to him, it has been reserved to later botanists to deal with the genus Galanthus in a more thorough manner. Mr J. G. Baker has done yeoman service in this way in his "Handbook of the Amaryllideæ," and in recent descriptions of the newer species in various periodicals, but the Royal Horticultural Society's action in holding a conference on Snowdrops in 1891, brought the study of the flower to a height never before reached. At that conference a brilliant synopsis of the Snowdrop

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was given by Mr F. W. Burbidge, M.A., the Curator of Trinity College Botanic Gardens, Dublin. I must draw largely from his work, supplemented by what has been discovered since the date of that conference, and by my own observation of all the species but one in my own garden, besides the cultivation of a number of the hybrids and seedling varieties. Mr Burbidge's arrangement in 1891 was founded upon the character of the leaves, and, although Mr Baker puts more stress upon the green markings upon the flowers as a guide to the systematic arrangement, I cannot but hold that Mr Burbidge's is the more satisfactory division of the main groups.

Mr Burbidge classed the Snowdrops as:—1. Those with narrow, glaucous leaves, such as those of our common Snowdrop, G. nivalis. 2. Those with broadly plaited glaucescent leaf, such as G. plicatus. 3. Those with broad lorate green leaves, such as G. latifolius.

Those who have studied the flowers in growth are disposed to agree with Mr Burbidge in thinking that these three species may be said to be the backbone of the genus, and that all others are either variations or hybrids of these three. I shall return to the leaves again, after beginning with what is the proper and most symmetrical starting point—the bulb.

The bulb of the Snowdrop is what is known as a true bulb, as distinguished from a cormous or other form of root, by being composed of a number of scales united together. Like the leaves, the bulbs of Snowdrops group themselves into three divisions, which may be readily distinguished when in bulk by their form. Thus Galanthus nivalis has ovoidal, or egg-shaped bulbs; G. plicatus has rhomboidal, or short-spindle shaped ones; and G. Elwesii has rounded, or, sometimes, oblate spheroidal ones. They are all variable in size, so that it is hardly safe to state the dimensions to which they grow.

If a section of a Snowdrop bulb is made, it will be found that it is composed of the swollen bases or petioles of two, three, or more of its former leaves, arranged eccentrically around the new growth. The inner faces of two of these scales are fluted in a pretty manner, and covered with a fine membrane.

The leaves have already been referred to, and it is unnecessary to say much more about them at present, especially as we shall have to touch upon them in speaking of the various species.

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It may be said, however, that the leaves of G. plicatus are the most distinct, because of the manner in which the margin is folded back. I regret that I have no specimens far enough advanced to show this as it ought to be done to give an idea of the true character of the leaves of this Snowdrop.

The scape, or flower stem, unlike that of the Narcissi, which belong to the same natural order—the "Amaryllideæ"—is solid and not hollow. It is elliptical in section, and fluted, and that of G. nivalis is only about half the thickness of the greater number of the other species.

At the top of this are the two spathe-valves, which serve the important purpose of protecting the flower ere it emerges. They are connected by a clear satin-like membrane, which in most Snowdrops bursts open on one side only, but in a few forms the membrane opens so as to show the twin-spathes separate. The spathe-valves are generally green, but in the case of a few varieties are yellow like the ovary, and other portions of the flower which are green in the normal forms. An abnormally formed Snowdrop has been found with two sets of spathe-valves, the lower set being green and the upper white, like the sepals.

The flower itself is composed, in addition to the ovary or seed vessel, of three outer segments, called the sepals. These are generally entirely white, but there are a few exceptions, which will be mentioned later. The inner segments are the petals, and these are more or less marked with green. Then there is a cluster of 6 anthers, opening by slits or seams near the apex, so as to allow the pollent to fall on the pin-like stigma in the centre of the flower.

SPECIES AND VARIETIES.

Taking the various species and forms according to Mr Burbidge's arrangement as a whole, although there is room for some difference of opinion as to what are true species and what are merely varieties, we come first to Galanthus nivalis, our common Snowdrop, a rather variable plant. There are two forms commonly met with. The small one we generally see in gardens, of which I have here a small specimen, grown in poor soil, and the southern form known as G. nivalis Imperati. I have here a specimen of one of the finest forms of the latter, one called Atkinsi, which, by the way, frequently has an additional

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segment. There are, however, a number of other varieties, and among these are what are called the autumn-flowering varieties, known by various names, such as corcyrensis, octobrensis, Rachelæ, and Olgæ. The distinguishing feature of the autumn-flowering forms is a whitish line down the centre of the leaf. In our climate most of these show a tendency to come into line with our common Snowdrop in time of blooming. Of the numerous varieties one can only mention a few of the most distinct. There is a large-flowered one, named Melvillei, interesting to Scotsmen from its having originated at Dunrobin Castle, Sutherlandshire. Virescens is an interesting one, from the green colouring of the exterior of outer segments. The curious Scharloki, which was found in Germany, has some green shading on these outer segments, but its divided spathes are its most distinguishing feature. Warei has divided spathes and green spots at the apex of the outer segments, like those of a snowflake. Flavescens and lutescens, which were both found in Northumberland, are rather weakly Snowdrops, which are much prettier when growing than in the dried state. They have yellowish ovaries and markings. The smaller is rather plentiful at Howick Hall, Northumberland, the seat of Earl Grey. A variety called poculiformis has very long inner segments, which are pure white and free from any markings. The double variety is well known, but I have a double one with yellow markings, and Mr Allen has raised one or two doubles of slightly different character. Galanthus caucasicus is generally considered a form only of G. nivalis, though some give it specific rank.

Galanthus Elwesii, of which I have a flower or two from Mr Davidson's garden, and a dried specimen from my own, is a very distinct Snowdrop from the mountains near Smyrna. It is most variable in size and in the form of the outer segments, but is not a very satisfactory garden Snowdrop. It was at first easily recognised by the tubular arrangement of the inner segments, which are crisped, and by the dark green basal blotch, and the two deltæ on either side, but the discovery of a few species with some allied features has shaken this means of determination. It is a remarkably varied Snowdrop in size and shape.

Galanthus gracilis, from Bulgaria, is the only one of the species I have not grown. It comes close to Elwesii, and has the basal blotch of the inner segments as in that species, but the

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lobes are not crisped as in G. Elwesii.

The fine G. cilicicus, of which I have a dried specimen here, flowered in the autumn of 1902 with me, but it did not bloom again until January, 1904. The flowers are not large in proportion to the size of the leaves, but it is a tall and beautiful Snowdrop, coming in nearer to G.n caucasicus than any other, in my opinion. It comes from Sirwas, in N.E. Asia Minor.

When Mr Burbidge drew up his synopsis he included only one Galanthus in his class 2—those with broadly plaited glaucescent leaf. This is G. plicatus, from the Crimea, a fine Snowdrop, which, however, has a curious habit of dying off without apparent cause. I have here a specimen, hardly at maturity, of a fine form of this, called Fraseri, selected in an Edinburgh garden from a lot of imported plants. It is more permanent than the other. You may be able to observe the reduplication or folding back of the leaves at the margin. Since Mr Burbidge's paper appeared we have had another introduction in this section, in the shape of Galanthus byzantinus, which is intermediate between G. plicatus and G. Elwesii. It is probably a natural hybrid. There seems some dubiety as to the source whence this Snowdrop has come, but it is said to have been found on the European shores of the Bosphorus. I have here a specimen, from a number which were collected on the Asiatic side, near Broussa. This is identical with G. byzantinus from the European coasts, and from a number of bulbs I had sent me by a collector from Broussa I had a very mixed lot of flowers, some showing a greater affinity to G. Elwesii than to G. plicatus and vice-versa. Thus I feel certain that this is a natural hybrid, but, although G. Elwesii occurs in that district, no one has yet traced G. plicatus to its neighbourhood. You will observe the rather curious form of the leaf, and the folding back as in G. plicatus.

In the section of Snowdrops with a broad lorate green leaf, Mr Burbidge mentioned two species, G. latifolius and G. Fosteri. Since then G. Ikariæ has been introduced, so that there are now three in this class. G. latifolius is a handsome-leaved Snowdrop, but as our climate does not suit it, I am unable to show a specimen. Its main distinction lies in its broad, shining green leaves. Its flowers are small and pure white. A form called

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Alleni is hardier, and I have here a portion of an immature leaf which gives an idea of the general character of the foliage.

G. Fosteri is generally believed to be a natural hybrid between G. latifolius and G. Elwesii. The green petal markings of this are like those of Elwesii, but the green apical spots are confluent. This is a most variable Snowdrop. When I left home it was not in bloom, so that I have not a dried specimen here, but, thanks to Mr James Davidson of Summerville, I am able to show a fresh bloom from his garden. One is glad to be able to show a specimen of G. Ikariæ, from the classic island of Icaria, where the body of Icarus was cast by the sea and buried by Hercules, after his unfortunate flight from Crete, when the sun is said to have melted the wax which cemented his wings, with the result that he fell into the Ægean Sea. The leaves of the specimen I have were not fully developed when plucked, but it will show the character of the foliage, although it cannot reveal the beautiful arching habit it has when fully grown. The flower is a fine one, and much superior to that of any other form with lorate green leaves. It seems to combine the characters of Galanthuses nivalis, Elwesii, and latifolius.

Within comparatively recent years hybridisation has given us a number of fine Snowdrops, the most of these having been raised by Mr James Allen of Shepton Mallet. When I left home only a few of these were in bloom, but I have a few here which will show how fine some of these are. Mr Allen principally employed G. nivalis, G. plicatus, and G. Elwesii as the parents, and it is interesting to observe the various effects of the crosses employed. I have also a series of hybrids obtained by the late Mr William Thomson, High Blantyre, Lanarkshire. Some of these are very handsome flowers, and I have here a specimen of one of these hybrids, which were all between G. plicatus and G. nivalis, though some are the progeny of hybrid plants themselves. Unfortunately, Mr Thomson is dead, and Mr Allen is now in such a state of health that there is no prospect of his being able to continue a work of great interest.

DISEASES OF THE SNOWDROP.

No one has as yet discovered the cause of the sudden collapse of plants of Galanthus plicatus or of the frequently short life of some plants of Glanthus Elwesii, but Botrytis

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galanthina is, unfortunately, only too frequently a destroyer of all Snowdrops, although, happily, there are some gardens where it has not been observed. Its popular name is given as "Snowdrop White Mould," but this, like many other popular names, is not a suitable one, as the fungus is more grey than white. There are few years in which it does not make its appearance in some gardens, and it seems as virulent on plants of original species newly imported as on the hybrids or those which have been long in cultivation. It seems to appear soon after a thaw, and is more prevalent in winters where we have frequent alternations of frost and thaws. It has, one time and another, attacked all the species and many of the varieties in my garden. This year I have only seen it on some bulbs of Galanthus cilicicus, but the plants of Galanthus byzantinus I had from Broussa were decimated, and a fine row of Gal. ikariæ suffered even more severely a few years ago. I have found several clumps badly affected among the myriads of plants in Arbigland woods, so that one cannot consider that it is artificial conditions which introduce it. I have here an illustration of Botrytis galanthina, in a copy of the "Journal of the Royal Horticultural Society," where it forms one of a series of illustrations of a capital series of articles by Dr M. C. Cooke on "Pests of the Flower Garden." The best treatment is the destruction of the infected plants by means of fire, and dusting round about the spot with sulphur or a specific for plant diseases called Veltha.

II.—METEOROLOGICAL OBSERVATIONS AT DUMFRIES DURING 1903. By Rev. W. ANDSON.

Barometer—Highest on 5th November, 30.629 in.; lowest on 27th February, at 5 a.m., 28.250 in.; annual range, 2.379 in. Mean barometrical pressure for the year (reduced to 32 deg. and sea level), 29.816 in. This is about one-tenth of an inch below average, and when the details are examined it appears that only one month in the year, namely, the month of June, had a mean pressure of a little over 30 inches, while several had values considerably below the average of the last 17 years. This was true of December, March, and October, the last-mentioned month in particular showing the abnormal figure of 29.461 in., instead of a mean of 29.925 in. On the whole, therefore, the

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Report of Meteorological Observations taken at Dumfries during the year 1903.

Lat., 55° 4′ N. : Long., 3° 36′ W. ; Elevation above sea level, 60 feet ; Distance from the sea, 9 miles.

1903.	BAROMETER.				S.R. THERMOMETER. In Shade, 4 feet above grass.				RAINFALL.		HYGROMETER.		Temperature of Dew Point.	Relative Humidity. Sat. = 100.
Months.	Highest in Month.	Lowest in Month.	Monthly Range.	Mean Pressure of Month.	Highest in Month.	Lowest in Month.	Monthly Range.	Mean Maximum.	Mean Minimum.	Mean temper. of Month.	Greatest in 24 hours.	Amount for Month.	Days on which it fell.	Mean Dry Bulb.	Mean Wet Bulb.		
	In.	In.	In.	In.	Deg.	Deg.	Deg.	Deg.	Deg.	Deg.	In.	In.		Deg.	Deg.	Deg.	
Jan.	30·589	28·811	1·778	29·794	51·	17·	31·	41·9	33·1	37·5	1·29	5·44	19	39·4	37·9	35·5	88
Feb.	30·477	28·250	2·27	29·867	54·7	29·	25·7	48·5	39·6	44·1	0·97	4·88	23	44·	42·3	40·	86
Mar.	30·214	28·540	1·674	29·595	57·	30·8	26·2	42·6	40·9	43·3	0·89	7·46	31	42·5	40·5	39·1	85
April	30·461	29·302	1·159	29·850	59·	25·2	33·8	52·1	34·5	43·3	0·70	1·71	13	43·4	40·2	36·5	76
May	30·481	29·240	1·241	29·871	79·7	35·2	44·5	60·3	42·9	51·6	0·41	2·63	18	50·7	47·1	43·3	77
June	30·480	29·742	0·738	30·086	76·8	36·	40·8	65·1	46·9	56·	0·46	1·71	10	55·8	51·1	46·6	70
July	30·350	29·439	0·911	29·881	80·	41·	39·	66·7	50·2	58·4	1·33	3·96	15	57·7	54·2	51·	78
Aug.	30·200	28·941	1·359	29·763	71·	39·	32·	65·8	48·3	57·1	0·66	4·35	22	56·2	53·	49·9	80
Sept.	30·573	29·400	1·173	29·969	69·3	31·7	37·6	62·8	46·1	54·4	0·90	3·39	16	53·6	5·3	49·7	88
Oct.	30·045	28·860	1·195	29·461	68·	30·	33·	54·8	43·8	52·5	1·28	8·55	28	48·3	46·3	44·1	86
Nov.	30·629	29·027	1·602	29·967	56·	24·	32·	47·5	36·8	42·2	0·44	3·06	23	42·1	40·6	38·7	88
Dec.	30·214	28·317	1·397	29·699	51·	22·	29·	40·8	32·5	36·7	0·39	3·31	19	36·5	35·4	33·8	91
Year..	30·629	28·250	2·379	29·816	80·	17·	63·	54·1	42·2	48·1	1·33	50·45	237	47·5	45·	41·8	83

WIND—

	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Var. or Calm.
Days ...	11½	29½	44½	41½	34½	98	57	44½	10

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year was one of low barometer readings, and the number of days on which these fell below 29 inches was considerably more than usual. They occurred in January, February, and March; and again in August, October, and December, and for the most part were accompanied by strong gales and heavy rains. The lowest reading of the year, 28.250 in., as previously noted, occurred in February, but in March it was little higher, and that month was throughout singularly boisterous and unsettled.

Temperature in shade, 4 feet above grass—The highest temperature of the year was recorded on the 2d July, and was no more than 80 deg. This was the only day on which the thermometer rose so high, the next being 79.7 deg., on the 31st May. June had a no higher single day temperature than 76.8 deg., and the absolute maximum of August was only 71 deg. This shows a remarkable scarcity of very warm, sunny days, although there seems to have been less deficiency in days moderately warm, with readings above 70 deg. The lowest temperature of the year was registered on the 14th January, with a record of 17 deg., giving an annual range of 63 deg. The warmest month was July, with a mean of 58.4 deg. August had 57.1 deg., and June 56 deg., all of which were decidedly under average. The coldest month was December, with a mean of 36.7 deg., and the next coldest January, with a mean of 37.5 deg., both of which were slightly under average. But the deficiency, we might thus have been led to expect, was more than compensated by the excess above average in several of the other months. In February it was 5.7 deg., in March 2.2 deg., and in October 5 deg., giving an aggregate excess of 12.9 deg., while the deficiency in the other months only amounted to 10 deg. Hence the mean annual temperature turns out to be slightly above average, viz., 48.1 deg., as compared with a mean of 47.5 deg. Of course, the explanation of such excesses of temperature as have been referred to in February, March, and October is to be found in the unusual prevalence of cyclones from the Atlantic with southerly, south-westerly, and westerly winds, and heavy rains. The first three months of the year were characterised by open and wet weather. April was cold and dry, May was favourable on the whole to vegetation, but during the proper summer months there was a deficiency of hot and sunny days, while the autumn, although mild, was very wet, and proved excessively injurious to the

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harvest, causing great lateness, and serious loss and damage to the crops. The number of nights on which the self-registering thermometer fell to or below the freezing point was as follows:—In January, 15, with an aggregate of 74 deg. of frost; February, 4, with an aggregate of 3.6 deg.; March, 1, with an aggregate of 1.2 deg.; April, 12, with an aggregate of 37.7 deg.; October, 1, with an aggregate of 1.2 deg.; November, 6, with an aggregate of 21.4 deg.; December, 17, with an aggregate of 64.3 deg. In all 57 nights with an aggregate of 203 deg. of frost. It will be observed from this report that February and March were uncommonly free from frost, and that April had more than its usual share. It may be noted as an unusual circumstance that the mean temperature of April was exactly the same as that of March, viz., 43.3 deg., and that February had a temperature slightly higher, viz., 44.1 deg., and in this fact doubtless we find the true explanation of the serious failure of the fruit crops. There was a great appearance of blossom in the early part of the season, but it was mostly blighted by the April frosts, and unproductive of fruit. January and December were, as usual, the coldest months of the year, but by no means in a degree exceeding the average.

Rainfall.—I need hardly say that the most outstanding and remarkable feature of the weather of 1903 was its excessive rainfall. The number of days on which precipitation took place to the amount of one-hundredth of an inch or more was 237, the average being about 200. In the month of March rain fell more or less every day, a circumstance almost, if not altogether, unprecedented of any month, and in October the number was very little short of the whole, viz., 28 out of 31. These two months were the rainiest of the year, October having a record of 8.55 in. and March of 7.46 in. The driest months were April and June, each of which had the same amounts, viz., 1.71 in., both below average; but with the exception of these two months, and of a slight shortage in November and December, all the other months had values in excess of the mean, but more particularly January, February, March, and October, the two first of which had nearly double, and the two last almost treble the amount of the seventeen years' average. The total fall for the year was 50.45 in., which is 13 inches above the mean, and the heaviest recorded at this station since observations were begun

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in 1887. The next heaviest was 47.08 inches in 1900. In 1891, 1894, 1897, and 1899 they ranged from 40.86 in. to 42.92, but all the others were under 40 in., the driest year having 30.99 in., in 1887, the average of the whole period being about 37 in. Three times in the course of the year there was a fall exceeding an inch in 24 hours, once in January, once in July, and once in October, and on these occasions the river was in heavy flood. During the months of March and October, indeed, it may be said to have been in constant flood, the depth at the New Bridge, as indicated by the gauge, ranging from seven or eight to eleven or even twelve feet. I have noted eleven and a-half feet on the depth on the 17th March, and twelve feet on the 22nd, and nine feet on the 27th October. There were dry periods in April and June. From the 16th to the 28th of the former month rain fell only once to the amount of no more than 0.03 in., and from the 5th to the 14th June, a period of nine days, there was no rain. Again, there was a period in September, extending from the 11th to 22nd, twelve days, quite dry, during which an opportunity was afforded on early farms of securing the safe in-gathering of the crops, but after that there were not two days in succession perfectly dry till well on in November, with the unfortunate result that the work of the harvest was almost completely arrested, and great loss and damage to the crops ensued.

Hygrometer—The annual mean of the 9 a.m. and the 9 p.m. readings of the dry bulb thermometer was 47.5 deg., very nearly equal to the mean temperature of the year. The annual mean of the wet bulb readings was 45 deg. The mean temperature of the dew point, as calculated from these data, was 41.8 deg., and the relative humidity (saturation being equal to 100) was 83.

As regards the wind directions, the south-westerly was as usual the most prevailing, blowing no fewer than 98 days. The next was the westerly, which had 57 days. Then followed the south-easterly with 45½ days, the east with 43½, the north-west with 42½, the south with 34½, the north-east with 29½, and the north with 11½, while six were calm or variable. Combining those which had a southerly and westerly direction, but including the south-easterly, we have a total of 235 days, while those from a northerly and easterly direction, including the north-westerly,

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only show a total of 127 days. The usual proportion of these two classes of winds is in general similar to this. But owing to the unusual prevalence of cyclones from the Atlantic during the past year, it seems to me that the southerly and westerly have had more than their ordinary share; and this would only be in correspondence with the fact of a temperature somewhat above the average, and a rainfall much in excess of it.

THE WEATHER IN RELATION TO HEALTH. By Dr J. MAXWELL ROSS.

(From the Dumfries and Galloway Standard.)

Dr Ross said that Mr Andson's paper showed the usual painstaking work that had always characterised his contributions to the society. As they were aware, there were something like sixty stations in Scotland accepted by the Scottish Meteorological Society, as well-equipped and from which observations were made. There were only two in this county, one at which Mr Andson procured his data, and one at Drumlanrig. Mr Andson's inability to be present last month and read his paper had afforded an opportunity of studying the observations taken at some of the other stations, and it was rather interesting to compare the results. At Drumlanrig, for example, some of the observations were in close accord with those of Mr Andson, while others were very different. Drumlanrig was situated 191 feet above the sea level, and the station at which Mr Andson made his observations was about 60 feet. That and other facts helped to account for the difference. The mean barometric pressure at Drumlanrig for the year was 29.593. Mr Andson's was 29.816, so that the higher pressure was, of course, where they might expect it. The mean maximum temperature at Drumlanrig was 53.4; the mean minimum, 39; and the mean temperature 46.2 degrees. These were rather less than Mr Andson's. The number of rainy days was found by Mr Andson to be 237. At Drumlanrig they were 240. The amount of rainfall at the latter place was also considerably in excess of Mr Andson's observations, being 62.86, or at least 12 inches more. With regard to direction of winds, it had to be noted that formerly the observations were recorded daily, and Mr Andson continued that, giving the prevailing wind for the 24 hours—probably the average re-

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sult of two observations—but the sum of the two observations made at 9 a.m. and 9 p.m. were now given in the society's monthly tables, making the observations apparently double those in Mr Andson's table. At Drumlanrig the prevailing winds, as at Dumfries, were south-westerly, there being 216 at the former against 190 which he had calculated as the observations of Mr Andson. Direct westerly winds at Drumlanrig were much fewer, 64 against 115. North-westerly were much more prevalent at Drumlanrig, 199 against 83. North-easterly and easterly were much more prevalent at Dumfries, the north-easterly numbering 61 against 44 at Drumlanrig, and the easterly numbering 89 against 5. Mr Andson indicated that the year was one of low barometer at Dumfries. The same remark held good over the whole of Scotland, only three months being in excess of their average, viz., June, September, and November. All the other months were below the average. Comparing the temperature of Dumfries with that of other parts of Scotland, he found that Dumfries was somewhat favoured. He did not know that it was exactly the hottest place in Scotland, but there were two months during which it certainly had that characteristic, in May and July, when the highest temperature of 79.7 and 80 respectively were recorded. The lowest temperature of the year at Dumfries was 17 degrees on 14th January. On the same day at Drumlanrig it was 13. The rainfall at Dumfries was 13 inches, and at Drumlanrig 18 inches in excess of their respective averages. Dealing afterwards with the influence which the weather made upon the mortality from various diseases, Dr Ross said he was not prepared to state that during the year the weather had abnormally affected health. The fact of the matter was that, if anything, last year had been one of the healthiest they had experienced, and showed one of the lowest death-rates. Taking the whole county, but excluding the burgh of Dumfries, for which he had not the requisite data, the death-rate was 15.609 per thousand. It was not always very easy to gather from a statement of that kind whether the year had been a healthy one or not, but he would put it in another way. If they took the average death-rates and calculated from them what they might call the expected deaths, they would find that there should have been something like 961, whereas the actual deaths amounted to 915; so that the mortality during 1903 was considerably less than

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what might have been anticipated. Dr Ross afterwards gave the weather conditions and mortality rates for the various months of the year, and summing these up he remarked that taking the months with deaths beyond the number expected, viz., January, February, July, August, October, and December, and the months with deaths below the number expected, viz., March, April, May, June, September, and November, he found, on contrasting their climatic conditions, that the difference between the two sets of months was not very great. The months with deaths beyond the expected number all had a low barometer. Four months had low mean temperatures, two had high mean temperatures, one had a low rainfall, one an average rainfall, and four high rainfalls. Of months with deaths below the expected number three had low barometer readings; two high, one average. The mean temperature in three of the months were low; in two, average; in one, higher than the average. The rainfalls were low in three months, high in two, and about the average in one. The greater number of deaths from zymotic causes occurred in the first quarter of the year, and were due to the prevalence of whooping cough in January and February. Of nineteen deaths during the year, fourteen occurred in the first quarter, and of these fourteen, nine were in January. Only one death was due to typhoid or enteric fever, and it occurred in December. Influenza was also prevalent during the first quarter, and was most fatal then, there being ten deaths in that period out of fourteen during the year. From consumption, or phthisis, there were 99 deaths altogether; and of these, 50 occurred in May, June, July, and August, the warmer part of the year. Twenty-eight occurred in the first four months, and twenty-one in the last four. These figures showed that consumption, though a debilitating disease, was not necessarily most fatal in the colder part of the year. There were 176 deaths traceable to circulatory, and 114 to respiratory diseases. The highest number of circulatory deaths in any one month occurred in March, when there were twenty-three. In January and October 20 were recorded. The lowest number was seven, recorded in July, there being ten in June and ten in September. From respiratory causes the highest number of deaths occurred in January, when there were 19, and in December, when there were 16. The lowest rates were in April, June, July, and

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September, showing that the colder and wetter part of the year was more liable to affect those suffering from that disease. In concluding, Dr Ross stated that study of the phthisis statistics would show that there was too much fear in regard to exposing consumptive patients to the weather. The death-rate from that cause was really higher in the warmer months than in the colder, so that fear of the results of exposure was a fetish that ought to be abolished.

29th March, 1904.

Chairman—Mr JAMES LENNOX.

EXHIBITS.—Flint-lock Carbine and 2 Brass-barrelled Flint-lock Pistols, with Spring Bayonets attached, the property of the Bank of Scotland, which had always been in the Dumfries Branch, since it was opened in 1784, by the Secretary; a Rose with a bud coming through the centre of the flower, by the Chairman.

I.—LAWS OF FINES FOR THE PRESBYTERY OF DUMFRIES.

An interesting document read by Rev. R. W. WEIR, and dated May 7, 1816, and being a list of the Fines imposed by the Dining Club of the Dumfries Presbytery.

II.—SOME SCOTTISH WORDS FOUND IN OLD ENGLISH WRITERS. By Dr CHINNOCK.

This valuable and interesting paper, which gave evidence of much knowledge and research, gave many quotations to show that many of our Scottish words were to be found in old English writers.

20th May, 1904.

Chairman—Mr W. DICKIE.

NEW MEMBER.—Rev. H. A. Whitelaw, Townhead United Free Church.

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I.—GEOLOGICAL NOTES. By Mr JAMES WATT.

In these interesting notes Mr Watt summarised in a concise manner the leading geological features of the two countries. It was shown that in England examples of the whole rocks forming the earth's crust in all its divisions of primary, secondary, tertiary, and post-tertiary, with the single exception of Miocene system, were to be found. And, such being the case, it was held that it was not too much to say that England, for the extent of its area, affords to the geologist and naturalist the most interesting field for observation of any country in the whole world; and this particularly on account of the abundance and variety of fossilised organic remains to be found in strata of secondary and tertiary times.

With regard to Scottish geology it was shown that its interesting features were of quite a different order from those of the sister country. In Scotland the secondary series of rocks, including the great Jurassic system, so rich in fossils, and the whole of the tartiaries were almost entirely absent. The exceptions were chiefly the great masses of volcanic rocks of tertiary age in the west of Scotland, in Skye, Mull, and other islands, where they rise in huge cliffs above the sea; as also by a great number of volcanic dykes which had risen through rents in the crust of the earth in different parts of the country. In addition a number of fossiliferous sedementary patches of rock in certain districts were mentioned. But upon the whole, it was shown that practically the geology of Scotland was notable, and most interesting from the fact that the mountains and whole surface belong to either the most ancient, the primary or Palaeozoic or to the most recent, the Pleistocene, with all the debris of the glacial age, grooved and striated rock surfaces, punched blocks, and great masses of boulder clay.

DUMFRIES CRAIGS.

The late Dr Harkness, of Dumfries, communicated a paper to the Journal of the Edinburgh Geological Society, in which he propounded the theory that these cliffs (the Craigs) were caused by two faults. That is, that a portion of the rock surface had been displaced and thrown down, leaving the cliffs as we now see them. I am aware that the officers of the Survey who

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surveyed this part of the country dissented from Dr Harkness's opinion. I am not aware of the views of those gentlemen on the subject, but, on my own account, I beg to differ from such an opinion, and will endeavour very shortly to state my reasons.

The three ridges out of which the Craigs have been hewn are masses of permian breccia, resting on sandstone—the sandstone of Georgetown and Craigs quarries. It is not a very material point, but we may note the heights as given in the New Ordnance sheet: Maidenbower Craig, 276.1 feet; Middle Craig, 247.4 feet; Lower Craig, 200 feet above sea level. The height from the base of the Maidenbower and Middle Craigs, measured by the eye, I take to be somewhere about 100 feet—standing up as sheer perpendicular cliffs, and I dissent from the fault theory, because (1) "faults" are not found in such form; (2) if the Craigs were formed of two faults the dislocation would have shown in greater length; (3) at the Middle Craig, north side, the sandstone is seen dipping below the breccia, which would not be in the case of a fault; (4) at Craigs Quarry, Maidenbower Craig, you can see the thick-bedded sandstones with breccia on the top. This is opposed to the existence of a fault. In my opinion, the Craigs are simply the topmost of the series of regularly alternating beds of sandstone and breccia with which the whole of the Dumfries Basin is filled, as has been shown by the well borings mentioned in a former paper. At the Gasworks the bore went through twenty alternations of sandstone and breccia, and, having gone down six hundred feet, had not reached the bottom of the strata. There cannot be a doubt, I venture to think, but that the appearance of these cliffs is due to the action of the waves and breakers of an ancient sea. The mechanical force exerted by storm-driven waves on a rocky shore is, as is well known, very great. It is a force always in action, and with the rise and fall of the tide, four times a day, it acts like a saw, cutting horizontally into the land; not so much from the weight of the waves alone as from the enormous power which they exert in times of storms and great gales, pushing forward great masses of gravel, sand, boulders, and dislodged masses of the rocks against which the waves are beating, and so pounding and battering the opposing barrier, until in process of time, in the case of a very hard rock, vertical cliffs are sculptured out of the line of coast. Such is the process by which I venture to think the Craigs have been formed. As to

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their age, the bases of each being at a higher level than any of the well-marked raised beaches of the country, as also the presence of boulder clay above and below and all around it makes it, I think, certain that they are of pre-glacial origin.

ARBIGLAND SHORE.

On the subject of this short paper there is no pretension of any original observation. But simply to offer a few notes of a walk along the shore on two occasions, and aided in this by the "Official Explanation of Sheet 5" of the Geological Survey Map. As seen standing on the top of the Twenty-five-Foot Beach close to the Arbigland grounds and looking down on the shore, below high-water mark, we see a horizontal section of what in carboniferous times was an atoll or coral island, which has been planed flat down by the action of the waves and other denuding agencies, affording good illustration of the deposit and growth of the original coral island, now merged into coralline limestone. Looked at from above it will be seen that these coral stones form a symmetrical basin, and that their successive beds are arranged in consecutive layers, and, when observed nearer, they will be seen to dip towards the centre at gentle angles. It can only be said further that the corals to be found along the shore are abundant and well preserved, also many shells, bivalves, gastropods, etc., all very interesting. According to the official account, on "the shore between Hogus Point and Carsethorn there is an almost continuous section of carboniferous strata, all much faulted and folded, which may be grouped in descending order: (1) Coralline limestone of Arbigland Bay; (2) sandstones and shales and marine limestones; (3) sandstones and shales, marine bands and cement sandstones." The great ice-borne granite boulder is a well-known object of interest on the Arbigland shore.

As we are not very far from Criffel, we may notice, in conclusion, that Sir Archibald Geikie, formerly Director-General of the Geological Survey, has observed that "while tracing the glaciation of the region, Dr Horne obtained proofs that the ice which drained from the inland country was in mass sufficient to override Criffel, and must, therefore, have had there a minimum thickness of 2000 feet. This is a fact of much interest, in view of the wide distribution of boulders of Criffel granite over the north of England, and even as far south as Wales."

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II.—VESTIGES OF THE CASTLE OF DUMFRIES. By Mr JAMES BARBOUR, F.S.A. (Scot.).

As far back as the reign of William the Lion a Castle of Dumfries existed, as appears from charters of that time describing tenements as lying between the Castle and the church. Later, about the year 1259, the Castle is mentioned as the place where the trial by jury of Richard, son of Robert, son of Elsa, for the murder of Adam the Miller was held. And frequent references to it occur in ancient documents relating to the period of the Edwardian wars.

Geographically, the Castle appears sufficiently authenticated. A report by an English official prepared between the years 1563 and 1566, printed in Armstrong's "Liddesdale," and given also in Mr William Dickie's "Dumfries and Round About," conveys a clear idea of its situation.

"The old Castle of Dumfries," the report says, "five miles and a half within the mouth of Nith, standing upon the side of the same, very good for a fort. The plat and ground thereof in manner like to Roxburgh Castle. It may late (command) the town and the bridge of Dumfries, and receive boats of ten tons as said is furth of England.

. . . . The town of Dumfries standeth vi. miles within the mouth of Nith, the head town of the shire. The Lord Maxwell hath a fair house, battled, within this town, but not tentable nor strong against any battery of guns."

The terms of this report show that the Castle of Dumfries stood on the side of the river half a mile below the town, a description which coincides with the place called Castledykes; and the castle which occupied the site of Greyfriars' Church in the centre of the town is differentiated as a house of the Maxwells.

Vestiges of the ancient Castle of Dumfries are thus to be looked for at Castledykes—a name suggestive of the existence of a castle fortified with dykes. Earthen fortifications were usually called dykes. At Carstairs a Roman camp with fortifications of this character was called Castledykes, and in Barbour's "Bruce" dykes is the term used:—

> **The Inglis men sa clossyt had**
> **Thair ost, with dykis that thai maid,**
> **That thai war strenthit gretumly.**

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Thai in hy towart the town;
And fillyt dykis hastily,
Syne to the wall rycht hardely
They went, with leddris that thai haid.

Castledykes has, no doubt, been much altered. The Kelton road skirts it on the north, and the road leading to the New Quay on the south, cutting off the river bank and Kingholm; and a house with its gardens covers the greater part of what was probably the Castle area.

Towards the north there is a tabular elevation, named on the O.M., on what authority I do not know, "Site of Comyn's Castle." From it the ground falls in all directions, gently at some places, but on the south and west quickly forming a steep and high bank. From the foot of this bank southwards the area is comparatively level, but still well elevated above the river.

Part of a great open ditch or fosse is found on the north and east sides of the plateau. It extends from the entrance gateway off the Kelton road eastwards, parallel with the road and nearly in a straight line, a length of eighty yards. At this point it turns with a wide and shapely curve and runs southwards 60 yards, where trace of it is lost. Evidently the ditch has continued westwards from the gateway for about eighty yards and thence southwards, thus covering the north, east, and west sides of the plateau. The west ditch, and the part of the north ditch west of the gateway, are filled with a large stone-built drain and a deep covering of earth. The only evidence of a ditch on the south side of the plateau is a longitudinal hollow at the west end. The shape and direction of the hollow, taken with the probabilty of such a ditch, may, I think, be accepted as sufficient proof. The open part of the ditch measures 50 to 60 feet in width at the top and 6 at the bottom, and the depths is 25 to 30 feet.

Obviously these are vestiges of the ancient fortifications of the Castle, encompassing the citadel, and judging by the parts open they appear to be as large and formidable barriers of defence as any of the ditches of military works reported in the proceedings of the Society of Antiquaries of Scotland.

Edward I. in the year 1300 greatly strengthened the castle. According to calculations by Dr George Neilson, contained in "Peel: Its Meaning and Derivation," ditchers to the number of 250, with some women helpers, worked on the fosses for a fort-

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night, and 60 to 100 carpenters, with two dozen smiths, were continuously at work for a period of between two and three months, cutting timber in Inglewood forest, Cumberland, and in woods near Dumfries, transporting the material and constructing with them round the Castle a stout palisade. Whether the palisade was the only carpenter work overtaken seems doubtful considering the number of workmen employed and the time occupied. It is a notable circumstance that masons are not represented among the craftsmen. Might not the scheme of strengthening the place embrace the building of a wooden tower?

It was to this place that Bruce fled on the slaughter of Comyn in the chapel of the Greyfriars' Monastery, situated at the other end of the town. In the words of Hemingburgh, "The Lord Robert de Brus went out; and seeing the Lord John's fine steed, he mounted it; and his men mounted with him. They set out for the Castle and seized it."

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Vol. XVII., Part 5.

THE TRANSACTIONS

AND

JOURNAL OF PROCEEDINGS

OF THE

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Natural History and Antiquarian Society

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CONTENTS.

SESSION 1904-5.

	Page.
Annual Meeting..	367
Chile—*Professor Scott-Elliot*	368
Forests: Wild and Cultivated—*Augustine Henry, M.A., F.L.S., &c.*...	375
Biblical Money, and Coins of the Holy Land—*Rev. H. A. Whitelaw* ...	376
Burial Urns found in Maxwelltown Park	377
Meteorological Observations for 1904—*Rev. W. Andson*	378
Notes on above with reference to Health—*Dr J. Maxwell Ross* ...	384
Liability of Japanese Larch to Larch Fungus—*W. Murray*	386
Birds observed on Solway—*R. M'Call*	388
Burgh of Annan, Extracts from Records of—*James Barbour, F.S.A. (Scot.)*	390
Sedum Telephium—*W. M'Cutcheon, B.Sc.*	394
An Antiquary's Notes—*George Neilson, LL.D.*	395
Some Local and other Popular Plant Names—*S. Arnott, F.R.H.S.* ...	404
Declaration of Loyalty by Inhabitants of Closeburn	410
Letter from Frances Carlyle, grand-uncle of Thomas Carlyle	411
The Weavers' Incorporation of Dumfries—*W. Dickie*	411
Kinnelhead, Notes on the Ruins at—*J. T. Johnstone*	421
Rarer Birds of the Solway Area—*Robert Service, M.B.O.U.*	423
Experiments with Cutting the Leaves of Plants—*Mrs Atkinson* ...	436
Field Meeting: Lincluden College	438
,, Kirkconnell, Troqueer	438
,, Thornhill, Penpont, and Glenwhargen	439
,, Lochmaben	439
,, Birdoswald, Lanercost, Nawcrth, and Brampton ...	440
,, Moniaive District	441
,, Dumfries and Maxwelltown Sewage Purification Works	442
Donations	443
Exchanges	445

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PROCEEDINGS AND TRANSACTIONS

OF THE

DUMFRIESSHIRE AND GALLOWAY

NATURAL HISTORY & ANTIQUARIAN SOCIETY.

SESSION 1904-5.

28th October, 1904.

ANNUAL MEETING.

Chairman—Mr G. F. Scott-Elliot, President.

New Members.—Mrs Atkinson, Ladies' Club, Dumfries; Mr Robert Barbour, architect. Mr G. W. Shirley, librarian of the Ewart Public Library, was elected an Honorary Member.

The Secretary and Treasurer submitted his annual reports, which showed that the Society had lost 23 members by death or resignation, that 4 new members had been elected, and that the Society had to its credit the sum of £57 14s 10d.

The following office-bearers were appointed on the recommendation of the Council:—President, Prof. Scott-Elliot; Vice-Presidents, Mr R. Murray, Mr R. Service, Mr Jas. Barbour, and Dr J. Maxwell Ross; other Members of Council, Rev. J. Cairns, Dr Martin, Mr W. M'Cutcheon, Mr Jas. Davidson, Dr Semple, Mr S. Arnott, Mr W. Dickie, Mr J. Tocher, Miss Hannay, and Miss Cresswell; Librarians and Curators of Museum, Rev. W. Andson and Mr Jas. Lennox; Curators of Herbarium, Prof. Scott-Elliot and Miss Hannay; Secretary and Treasurer, Mr J. A. Moodie.

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CHILE. By the President, Professor G. F. SCOTT-ELLIOT.

In the earliest times of which we have geological evidence Chile consisted only of a western range of mountains. There was no Andes, and to the east, where is now the Argentine Republic, rolled the waves of the Atlantic, only interrupted here and there by island mountain ridges, such as the Sierra Roca, which have since been almost worn away. On the floor of the wide valley between the western mountains and the Roca chain submarine volcanoes poured forth lava flows sometimes a mile in thickness. There were islands in the valley, and carboniferous period trees grew on them. Then great rivers scattered shingle and sand over these lava flows, which are now beds of sandstone and conglomerate: these last of the same age as our Locharbriggs sandstone.

After this the earth's crust began to shrink and cracks appeared running east and west, through which again molten rock poured forth, forming transverse ridges in the great valley. Copper is found along these ridges, and in 1901 the mines yielded about £1,593,246 export.

There followed a second period of shrinking and contraction, and the whole of Chile sank deep in the water. Whilst this went on deposits of shingle and of sand containing much gypsum were distributed over the valley bottom during a period of time corresponding to the Tiras. This sinking of the land continued, and in the great gulph so formed ammonites and sea-urchins disported themselves many thousand feet below the level of the sea.

The earth crust broke and yielded. There was a prodigious upheaval accompanied by volcanic disturbances. Limestones with remains of marine fossils were carried up to a height of 15 to 16,000 feet, and the Andes chain, adorned with volcanoes at the weaker spots, was definitely formed.

As a minor detail of this eruption, silver was deposited, with unfortunate results for the poor Indians, of whom 20,000 were employed by Valdivia in the very earliest days of settlement. These gigantic earth movements have by no means finished since the formation of the Andes, which seems to have occurred about the cretaceous period; earthquakes and upheavals and subsidences have continued to our own times.

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Moreover, these occur on a gigantic scale. Imagine mountains 5000 to 6000 feet high topped by icefields covering many square miles, from which powerful torrents lead down by narrow, tortuous steep-sided valleys to the lower grounds.

Then imagine your volcanic outburst, such as that of Volkan Viego, accompanied by deluges of hot ashes and great rivers of molten lava. All these, you must remember, on the top of and suddenly melting all the snow and ice.

It is not easy to get a clear picture of the destruction so caused, and of the extraordinary jumble of stones, sand, mud, and lava that filled up the Santa Gertrudis valley.

Ever since the Andes were made this sort of destruction has been going on, and it has been accompanied by upheavals and subsidences.

Somewhere about the beginning of the tertiary we find Southern Chile occupied by forests of conifers and other trees, with also many ferns. These became the beds of liquite now found near Concepcion, at Lota, Coronel, Arauco, even at Sandy Point, in the Straits of Magellan, and at various places up the east side of the Andes.

Still later all Northern Chile was submerged, and a great sea occupied the present nitrate fields. When this sea dried up, through elevation, the nitric acid of these seaweeds, in contact with gypsum and limestone, produced nitrate of soda. Some 400,000,000,000 of kilogrammes are supposed to exist, and the value of the export, iodine and nitrate, in 1901 was £9,181,440. The borate of lime alone came to £97,680.

Middle Chile, including the rich central valley, was, however, almost filled up even then by the richest soil, brought down by the Andine rivers, and blended at all the many diverse rocks which compose that chain.

The transgressions of the sea filled the lower part of the Chile valley with water, but the valley itself can be traced in sounds and inlets right down to Cape Horn.

Thus, Chile consists of (1) the Western Mountains; (2) the valley nitrate desert, rich land or sea inlet; (3) Andes, with its river system of valleys; and (4) another valley, the "Moreno," which is partly occupied by great fresh-water lakes, and partly filled by shingles or lavas or sand of recent deposit.

To the east stretches the monotonous terraces and tablelands

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of Patagonia and the Argentine Republic, only broken here and there by inconspicuous ridges which represent a great mountain system now nearly worn away.

The rainfall of Chile depends upon the prevalent winds. All winds from the east cross the Argentine and lose all moisture long before they rise into the cold Andine passes, where they form violent and dangerous hurricanes. These blow especially from 10 a.m., thus travellers have to cross in the early morning. We left the night's hotel at 4 a.m., and got over on mule-back by 7.30. But by a sort of suction these winds cause a breeze over the central valley which begins about 1-2 p.m. After a morning of brilliant sunshine, it dies off towards night. During the night cold air flows down into the valley from the Andes.

There lies in the Pacific Ocean a permanent eddy, a kind of "swirl," in the atmosphere. It follows that on all southern Chile a procession of westerly winds from the Pacific deposits abundant rain on the Pacific slopes and West Coast islands, As one passes north in Chile these winds are either parellel to or away from the coast and bring no rain.

Thus the rainfall varies:—

From Latitude				Valdivia.	Western end of Magellan's Straits.
24°-27°.	72°-29°.	29°-30°.	33°.		
0 over many years	0 in 1-2 years	0 in no year	16-20 ins. in 1 year	114 ins. 134 days in 1 year	149·65 ins. 313 days in 1 year

The last is Dr Coppinger's estimate.

The aristocracy are mostly Spanish descendants of the conguistadores, but many of the ruling families are partly of British descent. It must be remembered that South American republics owe a great deal to us. Our army in the Spanish peninsula, the great Earl of Dundonald, Elamirante Cochrane, guarded the Pacific for the insurgents. O'Higgins, the liberator, was the descendant of a West Meath Irishman, and such names as Walker, Pratt, Condell, Rogers, Simpson, and Golwards are found amongst the Chilian aristocracy. The loans which enabled the young republic to fight were raised in London, and, in fact,

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from the time of Drake, the Republic of Chile has been greatly assisted by British. It may be on this account that the governing classes seem more enlightened and business-like than other South American States. The military dictator, so common elsewhere, has not appeared in Chile. There has been, of course, one revolution, that of Balmacedan, but it was not of the usual South American type. Chile has come out victorious from a severe struggle against Peru and Bolivia. In these wars the Chilian people have distinguished themselves. They are of mixed Spanish and Indian descent, and brave, obstinate, enduring, and patient to the uttermost, but possibly cruel and blood-thirsty in success. It is these Chilians who do the hard labour of the nitrate mines, which are financed in London, and managed by British, chiefly Liverpool, firms. It is also this Chilian who does the agricultural work of the great fertile valley. The coffee-coloured water from some Andes stream is led for miles along broad channels, shaded by tall poplars, and distributed through those magnificent pasture lands, where three cows are kept on an acre, not three acres to a cow as in poor old Scotland. The forage alfalfa may yield five cuttings in the year. Few sheep are seen, because the water is said to contain a parasite liver-fluke. Corn crops are magnificent, and are sometimes thrashed after a very prehistoric manner. A troop of mares is driven into a large circle covered with corn, and they are made to gallop round this for twenty minutes, then sent in the other direction. They are turned out and the corn shovelled up, and a second supply is laid down, the process being continued by a second troop, and so on. The mares are kept for breeding, so that the process is not so wasteful as it looks or sounds. But it is dying out, and the wonderful Australian machine which reaps, thrashes, and puts into sacks all by itself is coming in. The system on these big estancies or farms is a very curious one, and directly descends from the Spanish days. The Chilian labourer or inquileno is given a house, made of a dobe or dried mud-brick, and as much land as he wants for raising beans and vegetables. He generally keeps pigs, chickens, possibly goats or sheep. He has always a horse, and many dogs, which guard the premises. As a rule he has a large family. For this he or one of his family has to work for the proprietor whenever called upon to do so. Taking current wages this amounts to a rent of

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possibly £10 to £30 per annum. The system seems antiquated and oppressive, but I do not think that the Chilian inquileno, though sometimes hard worked and poor, is by any means so badly off as the poor in our large cities in Scotland. The climate is glorious; no one ever seems hungry, and though it is said that there is much aquardiate or brandy drunk, one sees extremely little drunkenness—far less than in Scotland. The exports of agricultural products in 1901 amounted to £336,076. The Government fosters agriculture. I found an agricultural school at Chillan, a smaller town than Dumfries, where the care of vineyards and other agricultural practice was thoroughly and scientifically taught. Down the great central valley of exceeding fertility, irrigated after the Luca fashion and managed on old Spanish lines, runs a main line of railway. Locomotives and running-stock are American, but the travelling is exceedingly comfortable. Trains start from big cities at a convenient hour, stop for 25 minutes to lunch, and stop at a big city for the night. About dinner time, at every station, the traveller may choose plums, peaches, cherries, and other fruits from long files of baskets. The restaurants are excellent, and the fares by rail are extremely moderate.

Going south, after crossing the Bio Bio, which was for centuries the Spanish-American frontier, the whole character of the land and economy changes. The clearing of the forest and the formation of farms can be seen in every stage. Some 2500 acres of forest can be bought for £1000, on easy terms. Fencing and surveying is compulsory. First the smaller trees, creepers, and brushwood are cut through, and then the whole is set on fire. The blackened stumps of the larger trees are left till they rot away, standing in a melancholy fashion out of the rich, waving wheat. Wheat is grown till the land can no longer produce a harvest, and then it is used as pasture. Such a farm, if carefully tended, is said to yield about £250 a year. This southern part of Chile is rapidly losing its woods, and the farmers are often German, English, or Chilian. In this modern agricultural development Germans play a large part. Valdivia is wholly German, and very excellent and cheap beer and lager beer is made and exported through all Chile. Though the German language is kept up, and Deutschland is very conspicuous in convivial meetings and songs about the Vaterland, yet I am sure

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not one man of them would ever return to Germany on any consideration whatever.

At Sandy Point, in the Straits of Magellan, founded by Commodore Byron in 1764, a pastoral development is taking place on Australian lines. This place is the scene of Sarmiento's disastrous colony. Four hundred men and 30 women were left there, and by the end of the second winter 15 men and three women were left alive. A solitary survivor was taken away by Cavendish in 1587. But at Sandy Point there is a thriving town of 7000 or 8000 inhabitants, and in Tierra del Fuego Scotch and New Zealand shepherds with collies watch over thousands of sheep. The company which owns this land is said to have thriven exceedingly. My information leads me to think that for every £100 originally subscribed is now worth £3100. All depends on the simple fact that the sheep corresponds to the quanaco, and that the cold, inclement climate produces fine wool. At present many land companies are starting all along the great Moreno valley round the big lakes; but I should warn you that though there is rich and good land and excellent grazing, there are also many dry, arid tablelands, where even the ostrich hunter dare not go for fear of losing his horse and dogs by thirst.

Sawmills, tanyards, etc., are often German. Frenchmen are also common in Chile, and they have a large share in working the vineyards, in clothing, articles of luxury, and all sorts of expensive and dainty frivolity. A Frenchman introduced the snail Helixaspera, which is a Parisian dainty, and it is now a pest in every vineyard. The richer Chilian families often go to Paris, and all endeavour to keep up with Paris fashions. Thus the Chilian lady begins to spoil her complexion with powder and paint at a very early age. The streets of Santiago are paraded by jeunease doree of an effeminate and languid type, who make admiring remarks and criticisms on the ladies that pass. "Has not the little one a sympathetic appearance!" No lady ever dares to walk in the street without an escort. The ladies are usually invisible until twelve and one o'clock. After dinner, in the beautiful cool evenings of Chile, all the better classes patrol the squares or plazas, which are often beautifully laid out with trees and flowering shrubs, while an excellent band plays. The children attend this evening parade. Even quite small girls of four or five years old will take care to throw the sunshine of her

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smiles on every man or boy present. These ornamental parts of the towns show considerable taste on Italian and Parisian lines. It is astonishing to see what a magnificent effect a few square yards of stucco coloured a delicate pink and gaily painted railings can produce. This sort of rococo and stucco buildings and bad statuary might, however, have been avoided in some cases. The old rock of Sta Lucia, the original camp of Pedrode Valdiavia. and the cradle of Santiago, might surely have been left in its original stern ruggedness. It is now so covered with gilt railings, stucco parapets, gardens, and restaurants that it only reminds one of the decorations usual on boxes containing inferior cigars. Santiago with its 292,000 inhabitants, Valparaiso with 136,000 inhabitants, and a large residential suburb, Vina del Mar, were to us the least interesting parts of Chile.

It is in these towns also that the health of the people appears to be worst, that the people are worst off, and that religion seems to be at its lowest. In the smaller places there is a larger percentage of men attending more regularly than in any ordinary London church. Indeed, through Chile the priests have great power. This is shown by one astonishing fact. Every woman in the country, whatever her position in life, attends Mass in a black manta made of various materials, but entirely without decoration or ornament. These cities also suffer as regards health. Typhoid and other fevers are common, but in some ways they are in front of us in Dumfries, for every wall and tramcar and seat is placarded with agonised appeals to the public not to expectorate in public places. Over the most of Chile the climate seems to be excellent, and the only complaint seems to be that there is an extraordinary infant mortality. But when linen is habitually washed in what may quite fairly be called open sewers, when little children play with mangy dogs and measly swine on what we call here a free coup, it is absurd to expect anything else. Even amongst people quite well off, babies dine at table-d'hotes, and cry for a second glass of beer. On the whole, however, this vigorous little republic which calls itself the England of the Pacific makes an excellent impression on the stranger than is possible at home. Moreover, with a considerable experience of my fellow-countrymen when exiles abroad, Chile is the one place I have ever known in which everybody has something good to say of his Babylon, and, as a matter of fact, the descendants of

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English or Scotch people become entirely Chilians in speech and sentiment. The mixture of races and civilisation never failed to interest me. I passed New-Year's Eve at Angol in the company of a German from Hamburg in the hotel of a Basque from the Pyrennees. Telegraph and telephone wires cross unpaved streets. Under them rides an Indian woman with her baskets. Donkeys with loads of sticks stumble into the town from their fifteen mile journey. Bullock carts with solid creaking wheels come to the railway station, where American locomotives bring in polite Chilian officials, German chemists, Italian shopkeepers, French hotel-keepers, British merchants, pure Indians in blankets, and Chilian workmen.

25th November, 1904.

Chairman—The PRESIDENT.

NEW MEMBERS.—Miss L. H. M'Connell, Milnhead; Mrs M. A. Thompson, and Miss Bell, Castle Street, Dumfries; and Mr Edward J. Hill, Ladyfield.

FORESTS: WILD AND CULTIVATED. By Dr AUGUSTINE HENRY, M.A.F.L.S., &c., Kew.

In this lecture Dr Henry gave an interesting account of the wild forests of the world, and contrasted them with those which were cultivated, pointing out the errors in the management of most cultivated forests in this country, and contrasting them with those which are properly managed. The lecture was illustrated with limelight views. It has been published in the "Economic Proceedings of the Royal Dublin Society." Vol. I., Part V., No. 11, under the above title.

16th December, 1904.

Chairman—Mr R. SERVICE, Vice-President.

NEW MEMBER.—Mr Jas. Hewitson, Park House, Dumfries.

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EXHIBITS.—In addition to the coins shown by Rev. H. A. Whitelaw and referred to in his paper, a collection of German and Hamburg coins, by Miss Cresswell, Nunholm; coins of Charles I. and the Commonwealth, by Mr Jas. Davidson; Scottish and English coins, by Master Wm. Dickie.

BIBLICAL MONEY AND COINS OF THE HOLY LAND. By Rev. H. A. WHITELAW.

Ranging over an extensive field and beginning from the earliest ages, the lecturer showed the development of the idea of "purchase" from the principle of "barter" or exchange; how articles different in kind became related to each other by reference to a common standard of weight; how definiteness of weight (cf. Job xxviii. 15; Zechariah xi. 12) was quickly followed by definiteness of shape (cf. Genesis xlii. 25; Deuteronomy xiv. 25; II. Kings xii. 9; etc.). Not, however, till the seventh century B.C. did the medium of purchase take the form of coin, while the only coined money mentioned in the Old Testament, or connected with the Holy Land in any way during that period, was the Persian Daric or Drachm (B.C. 538-529), in gold and silver. (See I. Chronicles xxix. 7, Ezra ii. 69, viii. 27, and Nehemiah vii. 70-72.) Though commonly supposed to have been first coined by, and named after, Darius Hystaspes, of the Book of Ezra (the father of Ahasuerus of the Book of Esther and grandfather of Artaxerxes of Nehemiah), the lecturer inclined to the view that they were coined first by Cyrus, the conquerer of the fifth and last of the Lydian Kings, Crœsus, whose wealth of jewels and money fell into the conqueror's hands, and that the name given was from the Persian word "Dara," meaning "king," or "sovereign," a term analagous to that in use in our own day. The period between the Old and New Testaments occupied a large section of the lecture. In this, the series known as the Maccabæan coins was dealt with, beginning with the Shekels of Simon Maccabæus (B.C. 140-135), and ending with the copper coinage of Antigonus (B.C. 40-37), the last of the line. From the types displayed on these pieces it was interesting to observe the fluctuations and gradual deterioration in the national and religious idea of the Jewish people. Under the New Testament section came the coins of the Idumæans and those of the Roman

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Procurators along with the aurei, denarii, and brasses of the contemporary Roman Emperors. Here also were exhibited the pieces specified in the New Testament Scriptures (e.g., the stater, the penny, the farthing, the mite, etc.). A final brief section was devoted to the "Coins relative to Judaism and Jerusalem subsequent to New Testament times." Here were noted the coins of the First Revolt in the reign of Nero, the Judaea Capta and Devicta coins of Vespasian and Titus, and others celebrating the conquest of Judaea, the coins of the Second Revolt under Simon Bar Cochab, and the Aelia Capitolina coins of Hadrian and subsequent Emperors. Among the pieces exhibited from the cabinet of the lecturer were a Lydian Electrum (700-568 B.C.), Aegina Stater (early 700-550 B.C.), another (later type, B.C. 550-456), Persian Daric (B.C. 538-529), Siglos, Alexander the Great (Tetradrachms), Ptolemy I. Soter, Antiochus IV. Epiphanes, Antiochus VII. Sidetes, Jewish Shekel and Half Shekel, John Hyrcanus I., Alexander Jannaeus, Alexandra, A. Plantius (Judaeus Bacchius), Antigonus, Herod the Great, Herod Archelaus, Herod Antipas, Herod Agrippa I., Herod Agrippa II., the Procurators (Ambivius, Rufus, Gratus, Pontius Pilate, and Felix), Augustus' Stater, Tribute Penny, Simon Nasi, Judaea Devicta, Simon Bar Cochab, and Crusader Penny of Amalric II. These, with aurei, denarii, and brasses of Mark Antony, Julius Cæsar, Cæsar Augustus, Tiberius, Caligula, Claudius, Nero, and others, enhanced greatly the interest of the lecture.

20th January, 1905.

Chairman—Mr G. F. SCOTT-ELLIOT, President.

NEW MEMBERS.—Mr John Maxwell, Tarquah, Maxwelltown; Mr Harry Edgar, Ferguslea, Maxwelltown.

I.—BURIAL URNS FOUND IN MAXWELLTOWN PARK. By Mr JAMES BARBOUR, F.S.A. (Scot.).

Mr Barbour read an interesting note describing two Burial Urns found in 1904 in the field acquired by the Burgh of Maxwelltown for a public park. The large urn had been broken by

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the workman's pick, and only pieces were recovered, but the smaller, though imperfect, was nearly complete. Both urns contained a considerable uantity of calcined bones. Mr Barbour described the form and ornament of the urns, which may be seen in the Society's Museum, and presented them to the Society with the permission of the parties or authorities who had any interest therein.

The Chairman introduced Mr John Maxwell, travelling commissioner on the Gold Coast, who exhibited a number of the products of the colony, which he presented to the Society, and gave a number of details respecting these, for which he was heartily thanked.

II.—THE WEATHER OF 1904. By Rev. W. ANDSON.

Before submitting my annual report of the weather of 1904, I may mention that the instruments used, consisting of barometer, certified maximum and minimum self-registering thermometers, dry and wet bulb thermometers, and rain gauge, were inspected by Dr Buchan, secretary of the Scottish Meteorological Society, in September last, and on being compared with his standard instruments were found to vary so little from the standard that it was not considered necessary to apply corrections to the readings. I submit first of all a table, which contains a summary of all the observations taken during the year, which will be printed as usual in the Transactions, but which I need not read now. The remarks which follow are founded upon these observations, and intended to bring out the general character of the weather of the past year, as compared with other years embraced in the period of observation.

Beginning with the barometer, I find that the highest reading of the year occurred on the 21st January, when it rose to 30.655 inches; and the lowest on the 13th February, when it fell to 28.552 in., giving an annual range of 2.103 in. The mean annual pressure (reduced to 32 deg. and sea level), was 29.813 in. This is about one-tenth of an inch below the average of the last eighteen years; and is hardly what one would have expected in an exceptionally dry year. But it may be explained by a series of extremely low readings in January and February, and especially in the latter month, which had readings below 29 inches on

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Report of Meteorological Observations taken at Dumfries during the year 1904.

Lat., 55° 4′ N.: Long., 3° 36′ W.; Elevation above sea level, 60 feet; Distance from the sea, 9 miles.

1904.	BAROMETER.				S.-R. THERMOMETER. In Shade, 4 feet above grass.					RAINFALL.			HYGROMETER.		Temperature of Dew Point.	Relative Humidity. Sat. = 100.
Months.	Highest in Month.	Lowest in Month.	Monthly Range.	Mean for Month at 32° and Sea Level.	Highest in Month.	Lowest in Month.	Monthly Range.	Mean Maximum.	Mean Minimum.	Mean temper. of Month.	Heaviest in 24 hours.	Amount for Month.	Days on which it fell.	Mean Dry Bulb.	Mean Wet Bulb.		
	In.	In.	In.	In.	Deg.	Deg.	Deg.	Deg.	Deg.	Deg.	In.	In.		Deg.	Deg.	Deg.	
Jan.	30·655	28·650	2·005	29·784	50·	29·	21·	44·2	35·4	39·7	0·53	3·32	24	40·	38·2	35·6	85
Feb.	30·254	28·552	1·702	29·491	48·	22·5	25·5	41·5	32·8	37·1	0·44	2·55	20	37·2	35·7	33·9	95
Mar.	30·460	29·147	1·313	29·967	57·	26·	31·	48·1	32·4	38·7	0·81	2·57	16	38·3	36·5	34·	84
April	30·310	29·201	1·100	29·809	67·5	32·5	35·	54·5	40·3	47·4	0·52	2·88	22	46·3	43·	38·9	77
May	30·215	29·361	0·854	29·887	72·	33·8	38·2	58·2	47·3	50·6	0·53	2·08	15	50·7	46·5	42·1	73
June	30·377	29·270	1·107	30·020	81·7	41·	40·7	66·1	46·6	56·3	0·55	2·03	13	56·8	52·2	47·6	72
July	30·341	29·669	0·701	29·967	84·7	46·	38·7	69·3	52·2	60·7	1·40	2·68	16	60·3	56·4	53·2	77
Aug.	30·296	29·428	0·868	29·952	79·	38·	41·	66·8	49·3	58·1	0·82	3·85	17	58·1	54·8	51·8	80
Sept.	30·377	29·670	0·707	30·036	70·5	35·	35·5	63·4	45·	54·2	0·53	2·02	13	53·4	50·6	47·8	82
Oct.	30·497	29·123	1·374	30·046	63·	29·8	33·2	56·	41·4	48·7	0·56	1·89	14	48·2	46·	43·6	84
Nov.	30·510	30·200	1·310	29·961	56·	19·5	36·5	46·9	36·4	41·6	0·59	2·55	16	43·5	41·5	38·6	84
Dec.	30·567	28·878	1·689	29·825	53·	19·5	33·5	42·5	32·6	37·6	0·64	2·94	18	38·4	37·2	35·5	88
Year..	30·655	28·552	2·103	29·813	84·7	19·5	65·2	54·5	40·7	47·6	1·40	31·26	204	47·6	44·9	41·8	81

WIND—

	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Var. or Calm.
Days ...	9	31	37	52	41	93	57	40	5

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six days, and a mean for the month of only 29.491 in. The only months which had means above 30 inches were June, September, and October, and these were, on the whole, the finest months of the year. Cyclones, with their accompanying storms of wind and rain, were most frequent in January, February, and December, and in the first half of April; but taking the year as a whole, they were less frequent than usual, and there was a preponderance of anti-cyclonic weather.

We now pass on to temperature, that exceedingly important element in weather conditions—it being understood that the readings are all of thermometers kept constantly in the shade and four feet above the grass, in a Stevenson screen. The highest single day temperature of the year occurred on the 11th July, when a reading of 84.7 deg. was recorded. But twice also in June there were readings in excess of 80 deg., viz., 80.5 deg., on the 4th, and 81.7 deg. on the 5th. The absolute minimum, or lowest single day temperature of the year, occurred on the 26th November and the 11th December, when it was 19.5 deg. This gives an annual range of 65.2 deg. The warmest month of the year was July, with a mean of 60.7 deg., and the next warmest, August, with a mean of 58.1 deg. The coldest month was February, with a mean of 37.1 deg., and the next coldest December, with a mean of 37.6 deg. January, March, April, July, and October had monthly means slightly above the average, and the others means slightly below; but when the excesses and deficiencies were compared they were found almost exactly to balance one another, the former amounting to 7.2 deg. and the latter to 6.8 deg., so that we are prepared to find that the mean temperature of the year is just about average. It comes out at 47.6 deg., which is as nearly as possible the mean of the last eighteen years. It has been as low as 46 deg., and as high as 49 deg. But the exact mean is 47.7 deg. On the whole the season was exceptionally favourable to vegetation. But this was not due to any excess of warmth, as is shown by the fact that the mean annual temperature, as we have just seen, was barely up to average, although there was a fair number of really warm days, with temperatures ranging from 70 deg. to 84 deg. But the explanation is rather to be found in the distribution of the successive periods of moderate rainfall and dry sunny weather, which was such as to promote in a re-

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markable degree the growth, and ripening, and safe in-gathering of all kinds of crops. The first ten days of April were, indeed, unfavourable, owing to the boisterous and wet weather which prevailed, resembling that of March rather than that of April, and illustrating the well-known saying about the "borrowing days"—"March borrowed from April three days, and they were wild." But in this case it was not three days only, but ten days, or a whole third of the month. In consequence there was considerable delay in the seed-time, and the fear was expressed that the harvest might be late again, as in the preceding year. But so favourable did the weather become in the latter part of April and in the succeeding months, that the harvest, instead of being late, was rather earlier than usual, as well as abundant. The conditions of weather which secured this happy result were so well expressed in a recent letter in the "Standard," entitled "The Farmer's Year," by a Nithsdale farmer, that I think I cannot do better than quote his words. He says: "The season, taken all over, has been remarkable for long spells of fine weather, followed by short spells of showery weather, beginning with a good wet day and gradually tapering off." This occurred again and again in the course of the summer months, ending in ideal weather in September and October. I have already referred to the verification in April of a well-known weather saying about the borrowing days. There is another which relates to the month of October, which was as remarkably verified in the past year. It is called St. Luke's little summer. St. Luke's Day is the 18th of October, and about that period the weather is often remarkably mild; and it was so in a remarkable degree last year. On calculating the temperature of the seven days, beginning with the 17th and ending with the 23d, I found that the mean temperature of that period was 53 deg., whereas the average mean for the whole month is only 47.6 deg. These current weather sayings have reference generally to comparatively warm or cold periods occurring at seasons when weather of the opposite kind might have been expected. And there is another relating to November, to which I may refer, as verfied in the past year. It is called St. Martin's little summer, beginning with the 11th, which is Martinmas. The warmth of the week beginning on that day and ending on the 17th was something abnormal, viz., 48 deg., which is five degrees above the mean of the whole month.

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But shortly afterwards the temperature underwent a sudden and complete change, passing from spring-like mildness to the severity of mid-winter. Between the 20th and the 26th occurred a fall in temperature to 19.5 deg., and the heaviest snowfall of the year, or even of a good many years, measuring eleven inches in depth on the ground, and causing serious obstruction to traffic in many parts of the country both by road and rail.

I now pass on to the rainfall of the year. The number of days on which precipitation took place in the form of rain or snow was 204 (rain, 198; snow, 6). And the amount for the year was 31.26 inches. That is considerably short of the average of the last eighteen years, to which the period of observation extends. It is in striking contrast with that of the previous year, 1903, which measured no less than 50 inches. That, however, was the rainiest of the eighteen; but when the record of the past year is compared with the average of all these years since 1887, it falls short by fully six inches, being 31.26 in., as compared with a mean of 37.31 in. The other years most closely resembling it were those of 1887, with a record of 30.99 in., and 1902, with a record of 30.90 in., both slightly less. The rainiest month was August, which had 3.85 in., and the next, January, which had 3.32 in.; and, curiously enough, the driest month was October, which had only 1.89 in., whereas in the previous year it was the rainiest month of the whole year, with over eight inches, and in ordinary years has an average of nearly four inches. Most of the months were drier than usual, with the exception of April, which had 2.88 in., as compared with a mean of 2.12 in. One of the most notable facts in connection with the rainfall was the unusual dryness of the last three months, which are usually the rainiest. The average amount for these months is over eleven inches, but last year it was only between four and five, which was less than half. There was only one day in the year that the amount recorded for the twenty-four hours was in excess of an inch. That was on the 15th July, which is St. Swithin's Day, when 1.40 in. fell, being fully one-half of the whole amount for the month. The tradition is, that if it rains on St. Swithin's Day it will rain for forty days thereafter. This led me to institute an inquiry how far this well-known weather saying was justified by the facts, as ascertained by actual observation. I accordingly drew up a table, which showed: 1st, Whether St. Swithin's Day

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was wet or dry; 2d, on how many of the forty days following rain fell; and 3rd, the amount of rain for these days. The result, as shown by the table, was that there was not a single year in the past eighteen on which rain fell for forty days after the 15th. The greatest number was 34, in 1895, with the heaviest rainfall for the period, viz., 7.93 in., and the additional circumstance that St. Swithin's was dry. This was enough of itself to upset the theory. But in other respects also the facts were against it. I may mention that I sent a copy of this paper to Dr H. R. Mill, the editor of the "British Rainfall," who inserted it in the next number of his meteorological magazine. It drew forth two communications on the subject from other observers in England, both of whom practically agreed with the conclusions to which I had come. One of them particularly, who seemed to be an official in the Greenwich Observatory, and collated the Greenwich rainfall observations extending over 64 years, gives as the result of his calculations that a wet St. Swithin's entails on an average seventeen wet days out of the next forty, with a total rainfall of 3.13 in.; and a dry St. Swithin's brings the same number of wet days, with an average total rainfall of 3.33 in. This surely is sufficient to explode the old legend as a baseless superstition. And neither the farmer nor the pleasure-seeker need henceforth be unduly depressed by a wet, nor unduly elated by a dry, St. Swithin's, as the strong probability is that there will be very little difference in the kind of weather which follows in either case.

In connection with this part of the subject, perhaps it is right that I should notice the occurrence in this neighbourhood of the somewhat rare phenomenon of a "waterspout," which did a great deal of damage to the district in which it fell. The time was the 23d of June, and the district the upper part of Kirkmahoe and lower part of Closeburn, but extending eastward as far as Courance, in Kirkmichael. It seemed to come down upon Auldgirth Hill about 4 p.m. in a great body of water, which rushed with tremendous violence in different directions, part towards Auldgirth railway station, which was flooded, with a good deal of injury to the embankment; part by Forest farm and Boatrigg; and part by Dalswinton Mill, the gable of which was wrecked and the sawmill dam washed away, and cutting its way thence by levelling the stone dykes on each side of the road

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to Braehead, it reached the public road between Dalswinton Lodge and Boghead Bridge, cutting it up to the depth of four feet and thirty yards in length, and depositing great quantities of stones and mud upon the Dalswinton meadows. Part also came down upon the Duncow Burn, flooding the houses of the village, and carrying along with it great deposits of stones and mud. At Courance also, in Kirkmichael, either a separate waterspout, or more probably a part of the same, came down upon the Garrel, carrying havoc in its progress and causing no small amount of damage. The Garrel passed by a culvert below the Dumfries and Moffat Road, and the culvert being blocked, a chasm was made in the road at that point extending to a length of 150 feet and 25 feet in depth.

With regard to the hygrometer observations, the mean dry bulb reading for the year was 47.6 deg., as ascertained from the daily morning and evening readings, and exactly the same as the mean annual temperature calculated from the daily maxima and minima; while the mean wet bulb was 44.9 deg. From these values the mean temperature of the dew point comes out at 41.8 deg., and the relative humidity at 81, saturation being equal to 100. This indicates a dryness a little above the average, corresponding with the fact that the rainfall was decidedly under the mean.

The records of wind direction vary little from what is usual. The wind which prevailed during the greatest number of days, as it never fails to do, was the south-west, which had 93 days. The next was the west, with 57. And if we compare the northerly and easterly with the southerly and westerly, we find as the result that the former blew on 129 days and the latter on 231 days, while a few were calm or variable.

THE WEATHER IN RELATION TO HEALTH. By Dr MAXWELL ROSS.

Dr Maxwell Ross made the following remarks:—

He noticed the fact that the highest temperature recorded in Dumfries was in July, and the reading 84.7. He thought that was the highest record at any of the sixty meteorological stations in Scotland. A somewhat similar occurrence took place in the month of April. The absolute maximum was observed at Dumfries on 19th April, being 67.5. The weather sayings, about St.

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Luke's and St. Martin's little summers had been very remarkably verified in 1904. The observations also afforded an illustration, in the case of St. Swithin's, of the way in which such weather sayings could be corrected. One naturally wondered, in view of the destructive evidence adduced, how such a saying had obtained currency. He thought an explanation might be found in the fact that parties had been somewhat careless as to the way in which they phrased their weather prophecies. What was probably in their minds was that the weather conditions about that time of the year were fairly constant; consequently that if the day were fine there would probably be a continuance of fine weather; if you had bad weather it would probably continue for some time. In "Poor Robin's Almanac" (1697) the St. Swithin legend was thus expressed:—

"In this month is St Swithin's Day
On which if that it rain, they say
Full forty days after it will,
Or more or less, some rain distil."

We found the same tradition in Italy with regard to St. Gallo's Day. It was said in Tuscany that the weather on St. Gallo's Day would prevail for forty days. The poet Gay ridiculed such prophecies:—

"Let not such vulgar tales debase thy mind;
Nor Paul nor Swithin rules the clouds and wind."

There were similar popular sayings regarding other days in July:—

"If the 1st of July it be rainy weather,
It will rain more or less for four weeks together."

"If it rains on St. Mary's Day (2nd July), it will rain four weeks." "If it rains on first dog day (3rd July), it will rain for forty days together." Regarding 4th July:—

"Bullion's Day, gif ye be fair,
For forty days 'twill rain nae mair."

"If it rains on July 10th, it will rain for seven weeks." These all pointed to a general conviction that the weather conditions which were prevalent in the early part of July would probably continue for some time. Dr Ross proceeded to remark on the mortality records of Dumfriesshire for the past year, with a view to indicating how far the experience corresponded with the "seasonal mortality curves" of Sir Arthur Mitchell and Dr

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Buchan, while pointing out that, of course, no conclusion could be drawn except from data extending over a wide area and a long period.

10th February, 1905.

Chairman—The PRESIDENT.

NEW MEMBER.—Mr C. R. Dudgeon, Cargen.

EXHIBITS.—From Mr R. Service, a bunch of the marble gall of the oak, a specimen of the rough-legged buzzard (a male) taken in Corsock on January 6th, 1904, during the migration which took place during the season 1903-4, a pair of eggs of the rough-legged buzzard, taken in Lapland about 55 years ago; from Mr Montgomery, fruiterer, a living specimen of the small tortoiseshell butterfly, taken that morning from a case of oranges from Palermo, Sicily; from Miss Thomson, Langlands, pistol left by one of Prince Charlie's party on its way through Dumfries, seal from a D.D. certificate in 1675, fragment of a letter in cipher from Guy Fawkes, stone pipe from New Zealand, and pipe-head found in carriage of Prince Menschikoff after the battle of Alma; from Mr Waddell, a number of geographical models in relief of districts in this locality; from Miss Cresswell, a richly embroidered coat of period of Elizabeth, which belonged to Sir Philip Sidney, and carved tortoiseshell snuff box tops; from Mr Harry Edgar, a rare collection of old British stamps, including a specimen of the first issue; from the President, specimens of Egyptian cotton; from Mr R. Service, jun., a sixpence and a shilling of William III., recently found at Janefield Nurseries, and a Burns relic, being a collar which belonged to Jean Armour; from Mr John Corrie, Moniaive, a specimen of the stoat in its winter coat of white.

I.—THE LARCH DISEASE. By the PRESIDENT, on behalf of Mr W. MURRAY, Murraythwaite.

The discovery has been made that the Japanese larch can be attacked by this pest of our Scottish woods. This discovery is due to Mr W. Murray of Murraythwaite, who sent specimens of

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Japanese larch which were certainly attacked by the fungus. Dr Massee, of Kew, who is the best authority in Britain on the subject, has pronounced that the fungus is the real larch-canker, so that there is no doubt about the matter.

The trees were grown from seed brought by Mr W. Campbell from Japan, and planted out at Murraythwaite in the autumn of 1899. They are in a pure plantation of Japanese larches (Larix Leptolepis), but very close to a plantation of the common larch, which is badly affected by the disease. As only two trees of the Japanese seem to have been touched, it is certainly less subject than the common larch, at anyrate at present.

The fungus Dasycypha Willkommii, or Peziza calycina, is found on flattened deformed parts of the branches. The fruit (about the height of a capital letter) is whitish on the outside, ending above in a tiny orange-yellow cup. Several of these fruits are usually scattered over a deformed swelling of the branch. The orange cup contains thousands of spores, which are carried by the wind or insects to other trees. If a spore happens to fall on a young twig gnawed by a beetle or by squirrels, or on a branch accidentally peeled or broken in any way, it begins to grow, and forms a delicate cobwebby mass of threads, which develops between the wood and the bark, absorbing food which ought to nourish the tree.

Sometimes the tree by a great effort cuts off the injured branch by a sheet of cork and recovers, but more usually the fungus lives on, year after year, destroying its health and vigour.

The fungus is decidedly worst in damp, low-lying places; on mountain sides even the common larch sometimes escapes, as, for instance, at Dalswinton (on the authority of Mr Hattersley). But the present universal system of growing larches in pure plantations, without any other trees between them, must, of course, be particularly favourable to the spread of this or any other fungus or insect pest. Almost every spore of the thousands in a cup will reach another larch, instead of some other tree, which it would not be able to attack, and in this case, of course, it would perish miserably.

These pure plantations are, therefore, dangerous; the best continental authorities recommend a mixture of larch with deciduous and other conifers, for other reasons as well as the above.

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II.—LOCAL BIRDS. Communicated by Mr ROBERT M'CALL, Carsethorn, Kirkbean.

The annexed list of local birds is not offered as complete, but as an attempt to record those captured or recognised by a collector and observer on the coast of the Solway. All the birds named have been captured or seen within the limited area embraced between Colvend and Newabbey, and were mainly seen in the parish of Kirkbean and its coast, or on the Solway opposite. The list of land birds is incomplete, as the observer has not much opportunity of seeing those frequenting the woodlands.

The following are in his own collection, and of his own stuffing:—

Duck, Eider.
„ Common Teal.
„ Golden Eye.
„ Wigson.
„ Long-tailed.
„ Pintail.
„ Pochard.
„ Tufted.
„ Shoveller.
Fulmar, Sheldrake.
Gannet.
Grebe, Great Crested.
„ Red-throated.
„ Little.
Greenshank.
Kingfisher.
Tern, Black.
„ Common.
„ Arctic.
„ Lesser, or Sea Swallow.
Tern, Sandwich.
Water Rail.
Merganser, Red-breasted.
Ousel, Ring.
Phalarope, Grey.
Razor Bill.
Redshank, Spotted.
Sanderling.
Sandpiper, Purple.
Skua, Richardson's.
Blackbird.
Cole Tit.
Crested Wren.
Harrier Hen.
Magpie.
Owl, Long-eared.
Peregrine.
Pheasant.
Sparrow Hawk.
Starling.

CAPTURED OR OBSERVED IN DISTRICT.

Cormorant.
Curlew.
Diver, Great Northern.
Duck, Scaup.
Dunlin.
Godwit, Bar-tailed.
Goose, Barnacle.
„ Bean.

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Goose, Brent.
„ Pink-footed.
„ White-fronted.
Goosander.
Guillemot, Common.
Gull, Common.
„ Great Black-backed.
„ Glaucous.
„ Herring.
„ Lesser Black-backed.
„ Brown-headed.
„ Kittiwake.
Heron, Common.
Hooper Swan.
Bewick's Swan.
Knot.
Mallard.
Petrel, Fork-tailed.
Plover, Ring.
Redshank.
Sandpiper, Common.
Scoter, Common.
„ Velvet.
Sea Pyet, or Oyster Catcher.
Skua, Richardson's.
„ Buffon's.
Turnstone.

LAND OR FRESH WATER BIRDS.

Blackcap, Warbler.
Bullfinch.
Bunting, Reed.
„ Corn.
„ Snow.
Buzzard, Common.
Chaffinch.
Chiff-chaff.
Coot.
Crow, Hooded.
„ Carrion.
Cuckoo.
Dipper, or Water Ousel.
Dove, Rock.
„ Stock.
Goldfinch.
Fieldfare.
Grouse, Black.
„ Red.
„ Sand, Pallas's.
Hobby.
Jackdaw.
Jay.
Kestrel.
Landrail.
Linnet, Common.
Martin, House.
„ Sand.
Merlin.
Moor (Water) Hen.
Titlark.
Nightjar.
Owl, Tawny.
„ Barn.
Partridge.
Pipit, Rock.
Plover, Golden.
„ Green, or Pewit.
„ Grey.
Redbreast.
Redpoll, Lesser.
Redwing.
Rook.
Siskin.
Skylark.
Snipe, Common.
„ Jack.
Sparrow, Common.

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Sparrow, Hedge.
Swallow.
Swift.
Thrush, Common.
" Missel.
Tit, Blue.
" Great.
" Long-tailed.
" Tree Creeper.
Wagtail, Pied.
Wagtail, Grey.
" Yellow or Ray's.
Waxwing.
Whinchat.
White-throat.
Woodpecker, Greater Spotted.
Woodcock.
Wren.
Wood Pigeon.

III.—EXTRACTS FROM ANNAN BURGH RECORDS, FROM 1682 TO 1712. By Mr JAMES BARBOUR.

RIDING OF THE MARCHES.

30th October, 1682.—The said day the whole inhabitants were ordained to wait upon the Magistrates and Town Council the morrow, upon their best horses and in their best apparel, and that before the sun-rising, for riding of the town marches, and that under the pain of forty pounds Scots money, to be paid by each person inhabitant in case of failure.

30th September, 1697.—The marches to be ridden this year. The whole inhabitants except the present magistrates are to ride time about, and to carry the cripples time about.

REFERENCES TO THE PERSECUTION.

27th April, 1683.—The which day the Magistrates and Council ordain the treasurer and customers to pay their expenses when they went out upon the Laird of Claverhouse accounts conform to their respective accounts to be given by each one of them for that effect to the town treasurer.

22nd October, 1683.—Customs let to Pat Galloway, late bailie, for 1100 merks; and that without defalcation, be it peace or war. [He is to pay the full rent even should business be dislocated by civil war.]

14th October, 1684.—The Earl of Annandale chosen provost (his lordship then being 20 years of age). All the Council sworn, and likewise took the test.

8th February, 1689.—Earl of Annandale re-elected provost. Sir Robert Grierson of Lag was admitted burgess and freeman to

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give his advice and counsel to the burgh when required. The treasurer was ordained to uplift the custom of that year as from the Earl of Annandale.

THE REVOLUTION.

26th February, 1689.—Bryce Blair chosen commissioner to attend convention of estates appointed to be held at Edinburgh 14th March next in obedience to the Prince of Orange proclamation, to have for his pains two pounds sixteen shillings Scots each day during the sitting of said convention.

THE DOMINIE AND THE TERMAGANT.

25th October, 1685.—Walter Miller, schoolmaster, in Annan, was decerned in ten pounds Scots for striking Marioune Robsone, and the said Marioune Robsone decerned in the like sum of ten pounds for riving of the said Walter Miller's hair.

CONTEMPT OF COURT.

19th October, 1689.—John Davidson, in Seafield, was fined in twenty pounds Scots money for saying in face of the court that the magistrates had not given fair law and that it was like the Abay court wherein there was no law.

GUARDING THE CROPS AND THE FISH.

8th August, 1693.—Enacted that no man or woman be seen among stooks after daylight is past nightly until harvest be done. Enacted that no man or woman shall fish out of their neighbour's nets.

A WOMAN LEECH—ASSAULTS AND BATTERIES.

2nd January, 1694.—Treasurer ordained to pay Sibbild Johnstone, relict of the deceased John Lynding, 10s sterling, and that for curing of five wounds on Robert Johnstone's head, he being wounded by James Lyntone and his sons when the said Robert was employed in the town's business. The which day the persons under-named were decerned to make payment to the procurator-fiscal of the court and the fines after specified for the bloods (assaults to effusion of blood) and batteries (common assaults) committed by them, viz.: Robt. Johnstone, son to the deceased David Johnstone, late bailie of Annan, of the sum of

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fifty pounds Scots for a blood and ten pounds money foresaid for a battery committed by him upon John Johnstone, town officer. Item, Harbert Wilkine, fifty pounds for a blood and ten pounds Scots for a battery committed by him upon George M'Leive, in Annan. Item, Christopher Johnstone, son to Adam Johnstone, in Annan, fifty pounds for a blood and ten pounds for a battery committed by him upon John Glover, late servitor to Margrate Wilkine, in Annan. Item, John Davidson, in Seafield, and John Glesters, in Sandhill, each one of them fifty pounds for a blood and ten pounds for a battery committed by each one of them upon one another. Item, the said John Glesters and John Davidson, each one of them in fifty pounds for bloods and ten pounds for batteries committed by each one of them upon another, and all and each one of the said persons decerned to pay the said fines to the procurator-fiscal within term of law under the pain of poinding and imprisonment till payment be made thereof.

5th August, 1695.—Decerns Janet Smith, in Annan, to pay to the procurator-fiscal the sum of fifty pounds Scots for a blood and ten pounds for a battery committed by her upon Agnes Irving, spouse to Thomas Poll, merchant, of Annan, and one hundred pounds Scots for breaking of the King's free fair, in respect she did it upon the town's fair day.

TOWN CLERK AN OFFENDER.

4th June, 1700.— George Blair, town clerk, found guilty of a blood and riot—fined fifty pounds Scots.

SANITARY REGULATIONS.

14th March, 1699.—No person living within the burgh is to lay any dunghill upon any part of the town street without their fore doors; and no person to build any turf or peat stacks within any part of the high town street. Enacted that the town be causeyed; that there is great need of a mortcloth, which is to be got; and that the magistrates' seat in the church be repaired.

NO DEALING WITH GIPSIES OR "EGYPTIANS."

17th March, 1699.—John Irving absolved from William Gibson's unjust libel given in against him and his wife wherein

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Gibson accused him of resetting the Egyptians and corresponding with them and also eating and drinking with them.

IRREGULAR MARRIAGES.

20th March, 1696.—Robert Johnstone, son to the deceased David Johnstone, confessed to irregular marriage over the march, and was fined five hundred merks Scots, conform to Act of Parliament.

4th January, 1702.—George Johnstone confessed irregular marriage and fine 100 pounds Scots conform to Act of Parliament, and ordained to be imprisoned till he satisfy the same.

COUNCILLORS FARMING THE TOWN'S REVENUES.

The customs of the town were let by public roup, but were always taken up by one or other of the magistrates or members of Council, no one bidding against them. On one occasion, however, an outsider made offer and took the customs. Immediate payment was never exacted from any town councillor; but in this case (the only one which he observed in which the lessee was not in the Council) they required him to pay the money before noon of next day under penalty of being fined and losing his bargain. The following is the entry:

31st October, 1695.—Customs set to Robert Johnstone for 1210 merks Scots to be paid betwixt and 12 hours the morrow in the forenoon in Scots money or milned money, and in case of failure to be fined and the custom to be rouped over again. Failed and fined 100 pounds Scots. The treasurer ordained to collect and uplift the custom and account.

22nd December, 1692.—Customs set to Bryce Blair for 710 merks Scots, the common meadows to John Johnstone of Gallabank for 40 pounds Scots, and the boat set to John Smith for 43 pounds Scots. Enacted that none of the money for which the common goods are set for be disposed upon except my Lord Annandale, provost, his consent be given and precepts under his lordship's hand before disposing thereupon and likewise the persons who have had the common goods in times by past with the magistrates, bailies, and their clerk is to attend the Provost at Lochwood when called and account therefor.

1st November, 1705.—The public town and bridge customs were with consent of William Whyte rouped and set for £1000

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Scots to James Carlyle, late bailie, in case the prohibition upon linen cloth and cattle prohibiting the importation of them from Scotland and England be continued or allowed, or in case of open war betwixt the said kingdoms, then and in both cases, the said James Carlyle, shall only be countable to the Marquis [of Annandale] and burgh for what is received, etc. Moreover, in case the Act of council for the bridge custom be suspended by any merchants or others, the taxman shall have allowance therefore.

30th September, 1697.—The common goods, to wit, the custom, rent of the meadows, boat, and others, is for this year to be bestowed for building a bridge of stone over the north burne and mending the town causey and building a cross and a tolbooth. Customs set to Robert Johnstone for 1260 merks Scots. Boat let for £47 Scots. Walter Miller, schoolmaster, to uplift the feu duties for payment to him of his wages and warrant given.

MEMBER OF PARLIAMENT.

25th October, 1702.—Master William Johnstone of Sheens nominated to represent the burgh in Parliament.

SECRECY IN THE COUNCIL.

27th October, 1698.—Enacted that if any of the Council shall happen to devulge or reveal what shall happen to be spoken, agitated, or done by the Council, they are to be put off and degraded, and that no councillor shall oppose or speak against the magistrates under the like penalty, which is to be put off the Council.

IV.—SEDUM TELEPHIUM. By Mr W. M'CUTCHEON, B.Sc.

Sedum Telephium has got its common name Livelong from the fact of its keeping fresh for a long time after being cut. This property may often be noted in summer and autumn when the grass along the hedgerows is being cut. Should any of these Livelongs be cut, the flower buds will open as usual and set seed when all the other plants around have quite withered. The fleshy leaves contain a great amount of sap, and do not easily dry up, but besides this, numerous rootlets are to be seen springing out from the cut stems and seeking the moist soil.

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Last August I cut several stalks of this plant when the flowers were in full bloom, and to test their vitality they were put into a vase without water. In two months or so the leaves had dried up, and fell off at a touch, but the buds in their axils had grown out at least half-an-inch. The shoots were strong and tinged with red, and numerous rootlets were visible. One of the shoots was planted in a pot, but it did not thrive any better than those left on the parent plant. Only at present has it begun to grow to any extent. For the last five months the shoots growing from the withered stem have been entirely dependent on the atmosphere for their supply of moisture, which no doubt they would absorb by means of their aerial roots. The present year's shoots of the Livelong are now fully half-an-inch above ground. An example is shown, as also the small shoot planted off from the withered stalk.

17th February, 1905.

Chairman—The PRESIDENT.

EXHIBIT.—From Mr James Lennox, conical cap of bark used by natives of Uganda.

I.—AN ANTIQUARY'S NOTES. By Mr GEORGE NEILSON, LL.D.

PEEL OF DUMFRIES AND OTHERS.

Well known, and not to archæologists only, is the term "Peel," applied to the small rectangular towers of stone which stud the south of Scotland towards the English march. It is always interesting to break up the record of a term like this and to find that behind it, remote and forgotten, there lies an earlier sense. The records of the War of Independence sufficiently establish these not uninteresting propositions—that in 1298 the Peel made at Lochmaben by Edward I. was made by sawyers and carpenters; that in 1300 the Peel made round about the castle of Dumfries was of timber cut and sawn and shaped in the forest of Inglewood in England; and that in 1302 the Peel of Selkirk, although it had a gateway faced with stone, was essentially of the same character—an enclosed area fortified by a surrounding ditch, the banks of which were crowned by a

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carefully constructed stockade. Wages accounts are extant for all these operations, the most significant being that of the carpenters making in the forest of Inglewood the Peel to be set up round about the Castle of Dumfries. A military term like this indicates rapid transformation. In war everything moves fast, and the engineering fastest of all. Down to the 16th century the distinction between a Peel and a castle of stone continued, although by degrees the original significance of the term was in course of being forgotten until at last the term came to mean everywhere an ordinary small Border tower.

Many years ago, when writing an essay on the early Peels of Scotland, I was discussing with Dr Thomas Dickson, then keeper of the Historical Department of the Register House, the Peel of Linlithgow. He then told me he remembered, a long time previously, that John Stewart, secretary of the Society of Antiquaries of Scotland, came one day into his room in great triumph, waving a sheet of parchment, and told him that it was no other than the account for the making of the Peel of Linlithgow, in which, as is well known, Edward I. passed the winter of 1301. But Dr Dickson added that he never knew what became of it and he saw it no more. Well, it happened that just a year ago my friend, Mr J. H. Stevenson, advocate, mentioned to me that he had laid aside in an envelope addressed to me a Linlithgow document. Before he went further, I interrupted him, and repeated Dr Dickson's conversation. "Well," said Mr Stevenson, "the document I have is the missing account." And so it proved, and now you have before you Edward I.'s wages account for operations by workmen of various kinds upon the works of Linlithgow Castle and Linlithgow Peel in the month of September, 1302. Masons, carters of stones, carpenters, blockers, carriers of timber, smiths, ditchers—among them women at 1½d a day—watchmen, wood-cutters, sawyers are here—the same as at the making of the Peel of Dumfries—and there is also a porte martel——a man who carried the mell. It shows incidentally that there were not a few Scotsmen in the employment of the English—Inglis, of Bothwell; Adams, of Rutherglen; Henry, of Berwick; Friar Thomas, of Edinburgh. This fine record of the days of usurpation will satisfy anybody who looks at it how methodical was the accounting and book-keeping of Edward I. Here is a part of the account relating to ditchers:—

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To 8 captains of twenty of the ditchers each getting 3d a day for 6 days, 12s.

Item, 60 men working under them at 2d a day for 5 days, 50s.

Item, women working under them at 1½d a day for the same time, £4 7s 6d.

Item, 2 porters at 3d a day, 2s 6d.

Item, to 17 porters at 2d a day, 14s 2d.

The entire cost of all the operations on this pay-sheet was £45 8s 0½d, and the "prob" put opposite each summation shows that the account was as carefully checked as it was carefully made out. In mediæval fortification as in the fortifications of the present day, the ditches were reckoned of chief account among the elements of defence. The works at Linlithgow are a sufficient example. A few stone quarries, a handful of masons, a gang of wood-cutters, and another of carpenters did their part. The number of ditchers, however, is decisive of the extent to which the simple element of the ditches must have predominated in the work. The account, you will notice, proved to be a much more permanent affair than the English possession of the place.

THE DEATH OF COMYN—AN EARLY ENGLISH VERSION.

The second item of my Notes is concerning the slaughter of Comyn. I hope that some day this society or some other society elsewhere may take up the full story of this event and endeavour, by a critical examination of all the authorities, to present a collated account. I do not for one moment profess to offer you that to-night. I have many notes made with the view to attempting it some day, but what I want to do now is to give you a copy of an early English account of the incident. It is a transcript made from a manuscript in the Hunterian Library at Glasgow of a passage from a "Brut of Engelond," belonging to the fourteenth century, and is on the whole a very faithful rendering of an Anglo-French original, dating from before 1340. You will agree with me that in respect of quaintness of language and circumstance of narration the English account is one not to be lightly set aside. It begins with the rubric:—

"Howe Robert the Brus chalenged Scottlond. And after this Robert the Brus Earle of Carrike sente bi his lettres to Erles and baronns of Scottlonde that thei scholde come to him to Scone in the morwe after conception of oure lady ffor heige nedis of

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Scottlond and the lordes come att the day assigned and att the same day Se Robert the Brus ffaire lordes ful welle ye witte hit hit that in my persone dwelleth the right of the Reame of Scottlonde and as ye witte wel as rightful heire Seth that Se John Baillol was zair kyng that was oure kyng ws hath for sake and al so lefte his lande and thought hit so be that kyng Edwarde of Engelond with wrongful pouer hathe made me to him assent a geijens my wille if that ye will graunt that i be kyng of Scottlonde y schal kepe you ageins kyng Edwarde and a gens alle maner of mene. And with that worde the abbot of Scone aroos and be fore ham alle saide that hit was resoun for to helpe him and the lande to kepe and defende and thoo said in presence of hem alle that he wolde gief him a thousand pounde for to mayntene the londe and alle the othir grauntede the londe to him and with here pouere him to defende and helpe and defied kyng Edward of Engelonde and saide that Robert Brus schölde be kyng of Scottlonde.

"Howe Se John of Comyn gayn saide the crounyng of Se Robert the Brus. Lordynges saide Se John of Comyn thenketh up on the treuth and the othe that ye made to kyng Edward of Engelond and as touching my selfe I welle nought breke myn othe fr noman. And so he wente from the companye at that tyme. Wherefore Robert the Brus and all other concented were wondire wroothe and thoo manaced Se Johon of Comyn. Tho ordeigned their another counceil at Dunfris to the whiche come the fforsaide Se John Comyn nought but dwelled ij myle fro Dounfrys there that he was wonede to sojorne and abide.

"How Se John Comyn was wronglych quelled. Whenne Robert the Brus wiste that alle the grett lordes of Scottlond wer comen to Scone saf Se John Comyn that sojournede tho neyg Scone he sent after him spesialith that Se John Comyns schold come to speke with him and up on that he sent after him Sir John Comyns ij brethryn and preide him for to come and spek with him att the Graifieres of Dumfris and tht was the Thursday after candelmasse and Se John grauntede heme for to wende with hem and whanne he hade herde messe he tok a sop and dranke and afterwards he bistrod his palfray and rod his way and so he came to Dunfrys and Robert the Brus saw him come at at awyndow as he was in his chamber and tho he made yoie ynonghe and come ayens him and colled (embraced) him abowte the

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nekke and made with hym good semblaunt and whenne alle the Erles and Baronns of Scottlond were present Robert the Brus spak and saide Sers quothe he ye wette wele encheson (because) of this comyng and wherefore that hit es if that ye welle graunte that y mst be kyng of Scotlond as right heire of the londe. And alle the lordes that were there saide with oo vois that he scholde be crownede kyng of Scottlonde and that thei wolde him helpe and him mayntene ageiens alle maner of menne lyve and for him if hit were mede to deie. The Gentyl knyght to John of Comen th answerede and saide certis never for me ne for to have of me as moche help as the valu of o botonne fa that oth thet y have made to Kyng Edward of Engelond I schal holde hit whilis my lif last and with that word he wente fro that companye and wolde have went up on his palfray. And Robert the Brus purseuede him with a drawn sworde and bare him thorugh the body. And Se John Comyn fil doune to the erth. But whenne Roger that was Se John Comynes brothir saugh this fallenesse he sterte to Se Robert the Brus and smott him with a knyfe but thee fals trettour was armed undir so that the strok myght dou him non harme. And so moche help come aboute Se Robert the Brus so that Roger Comyn was there quelled and al to hewe in small piecis and Robert the Brus tournede ageien there that Se John Comyn that noble Baronn lay wounded and pynned to ward his dethe be sides the heige auter in the chirche of the gray freres and saide un to Se John Comyn O traitour thou schalt be ded and nevere after lette myn avauncement and schok his swerde att the heigh auter and smot him on hed that the brayn fill doun up on the ground and the blode stirte an heighe in to the wallis and yiet in to this day that blode es sene there that no water may wasch hit away and so deide that nobil knyght in holy cherch."

STORY OF A DOUGLAS CHARTER.

Once upon a time, a bookseller friend of mine told me in answer to my question that the only manuscript he had was an old charter, which he pressed me to take. A cursory glance was enough to make me decline, but, of course, he insisted, and with that fatal want of firmness which has been the bane of very many better men than myself, I yielded. For the modest sum of 7s 6d that bookseller had inflicted upon me this alluring and worshipful document (tattered parchment produced), so eminently

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fitted to excite a sense of the fascination of manuscript. Outwardly considered, indeed, it is not of much account: damp has been at it, perhaps the mice have sampled the vellum, and it is ragged and frayed about its inwards although constitutionally intact. Such as it is, it will serve to illustrate the constant possibilities of surprise, the revelation of unsuspected elements of early record—in a word, those chances of discovery, sometimes even romantic chances of historical discovery, which lurk in the faded lettering of long ago. For my charter was a document of State, a voucher from an obscure and troubled period of Scotland, a witness called thus late into the witness-box to testify concerning the days when James II. held ineffectual sway, when Crichton and Livingstone rivalled each other in their effort to hold the reins of government, while the powerful Earl of Douglas, sullen, contemptuous, and nursing his own ambitions regardless alike of King and minister, stood proudly aloof. It was a charter of James II. in January, 1448-9, containing a transumpt or official copy certified under the Great Seal of no fewer than eight earlier charters. Some of these were previously known, though not in their completeness, some were now for the first time added to the existing store of national record. What were the grants contained in these deeds? There was an earldom in one of them; there was in another a lordship over what is now a great westland shire; there was a Border barony with almost Palatine jurisdiction; there was the moiety of a holding in Ayrshire which had formed a seat of the Stewart line. Here was a confirmation and re-grant by David II. in 1368 to Thomas Fleming of the Earldom of Wigtown as his grandfather had held it except that for certain reasons the right of regality was reserved. There was a charter by this Earl, Thomas Fleming, in 1372 indicating that on account of the great and severe discords between him and the native chiefs of the Earldom of Wigtown he had sold to Sir Archibald, Lord of Galloway, all his Earldom for a certain notable money-price—the Earldom with all its marches, pastures, moors, ways, paths, waters, bondsmen and bond-service, with the rights of hawking, hunting, fishing, fees, forfeitures, and estates, liberties, conveniences, easements, appurtenances, and free customs. It is the full authentic story of the acquirement of the Earldom by Archibald the Grim. Here, too, is the charter, a few months earlier, of September, 1367, granting

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and confirming to Archibald the Grim for his diligent and acceptable service, efficiently and effectively rendered to David II., all the royal lands of Galloway between the water of Cree and the water of Nith, "for the pacification and justification" of which the said Archibald made no small expenditure and labour in his own person, and which lands are granted with all the feudal pertinents and lordship "cum burgis"—with the burghs and liberties of burghs therein as freely as Edward Bruce, our dearest uncle of good memory, held the same, rendering in name of blenche farme a white rose annually at our castle at Dumfries at the feast of St. Peter, "ad vincula." Here, too, is the grant on 5th June, 1358, to Thomas Murray, of the Barony of Hawick and Spruceton, on the Tweed. Here also is a strange document —the verdict of a Roxburgh jury in 1320 in answer to a question as to the tenure by which the Lord De Vescy had held Spruceton, a verdict declaring that he had held Spruceton regaliter, that he held it regally by the same liberties as King Alexander held his lands when he reigned, and that he had the right to have his own justiciary, his own chamberlain, his chancellor, his crowner, his sergeants, and also his standard measures, in the manner of the said King Alexander. Here, further, is a charter of 1322 by King Robert the Bruce in favour of his natural son, Robert, of the lordship of Spruceton, among the witnesses to which are the Abbot of Arbroath, the Chancellor, and Randolph, Earl of Murray—that Randolph who redeemed so gallantly at Bannockburn the rose that fell from his chaplet early in the fight—the Abbot of Arbroath, the patriotic prelate, who, in the intervals of his vocation as statesman and chancellor, found leisure to indite that Latin song of Bannockburn on which so few students of Scottish history have ever deigned to bestow their attention. Here, lastly, is another charter of uncertain date by Robert the Bruce in favour of his kinsman, William Murray, of half the tenement of Stewarton, in Cunningham—a deed to which the witnesses, besides the Abbot of Arbroath, are Sir James of Douglas and Sir Robert of Keith—the one, famous as the daring soldier of infinite resource, "the good Lord James," right-hand man of Robert the Bruce in the War of Independence; while the other was Keith, the marshal, who led the charge of horse against the English Archers at Bannockburn. It is a procession of noble names we meet in these charters and the con-

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firmations of them—some by David II., others by Robert II., and all of them by James II. The spirit of feudalism stirs anew as we salute Robert the Bruce; his gallant, if headstrong brother; "the good Lord James," shrewdest and most daring of lieutenants; Archibald the Grim, half-soldier, half-judge, "pacifying and justifying" Galloway; Sir Hugh of Eglinton, poet and singer; and in company with him Sir Robert of Erskine, the chief man of affairs in the Scotland of his time. These make a gallery of Scottish notables, a list of names which, in the annals of an age of chivalry and rising national spirit, can stand comparison with the proudest Europe has on the honoured roll of the 14th century.

In its variety of contents, too, this is not merely a charter. As regards feudalism it might serve as a manual, and the terms and usages it illustrates might keep a local antiquary going for a month to explain. One may, in passing, notice only one or two things—the sale of an earldom as a recognised and approved transaction; the old disused castle of Dumfries treated as a "caput baroniae" as the head place of the disjoined lordship of Galloway west of the Nith and east of the Cree; the conveyance of the burghs of Galloway by the King to Archibald the Grim with the lordship; the feuds of Galloway as the last signs of Celtic protest against Norman feudalism. Nor is the light confined to the 14th century, for the final confirmation, the charter itself proper, is by James II., and the problem confronts us—What brings these incongruous deeds together? What is the bond of union between these charters of Thomas Fleming and Archibald the Grim, Thomas Murray of Hawick, Robert Bruce of Spruceton, and William Murray of Stewarton? In whose favour is this deed conceived? What is its object? Happily, the answer, though not expressed on the face of the deed, is obvious from what it contains. In 1449, one man was lord of all the possessions in all those charters; one man held the Earldom of Wigtown, was Lord of Galloway, owned the lordship of Stewarton and the baronies of Hawick and Spruceton. That man was William, Earl of Douglas, who alone had any interest to serve from such a document as this. To this Earl William in January, 1449, this charter was certainly granted. When we look at the witnesses we shall find the list significant. One of them is Alexander, Earl of Crawford; another was Sir Alexander Livingstone of

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Callander; a third was Robert Livingstone, comptroller. The first of these was that Earl of Crawford whose "band" or alliance with Douglas was to cost Douglas his life. In September, 1449, Sir Alexander of Livingstone, Lord of Callander, was arrested for treason, tried, convicted, disgraced, forfeited, and imprisoned. Robert Livingstone, the comptroller, was tried too, was convicted and was executed. The Livingstone faction was overthrown in blood, and "all put down," says the chronicler of the town, "all put down that thai put up." It was a beginning of troubles which were hasting to become history and to overwhelm more than the Livingstones. This document marks in a unique manner the summit of the Douglas power just as that family was visibly and perilously near to that pitch of insolent ambition which provoked the catastrophe of the assassination of 1452.

A DUMFRIES SASINE.

The final subject of brief comment was found in a notarial document concerning Crukitakyr on the road from the Chapel of St. Mary the Virgin at Castledikis, dated 26 March, 1332. The deed was expede by Thomas Connelsonne, a name met with elsewhere, as that of a practising notary of the period, and its interest lay in the mention of the castle chapel of St. Mary in Castledykes. My excuse for introducing it is that I might make a suggestion to this society. The amount of historical information that is contained in the instruments of sasine is, of course, prodigious, and there are in Dumfriesshire several very valuable protocol books which are the places where they are contained. There are one or two in Mr Grierson's hands as town clerk, and one or two in the possession of the Buccleuch family, and I would ask this society to consider whether it could not do the country a great service by organising means whereby these protocol books might be, if not edited in full—which would involve a considerable amount of labour—at least calendared. There can be no doubt that the body of territorial, genealogical, topographical, political, and, indeed, national records embodied in these documents would be a great god-send to Scottish history, and it would reflect the utmost credit on the society that carried through the work.

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II.—POPULAR PLANT NAMES. By Mr SAMUEL ARNOTT.

We may begin by taking the common burdock, whose sticky burs have given so much amusement to many youthful generations in past and present times. It is best known in the south of Scotland simply as the bur, but elsewhere it has other names. Thus it is the cockle or cuckle buttons of Devon; while elsewhere the burs are called variously bachelor's buttons, sticky buttons, and billy-buttons, said to be so-called because boys stick them down their coats to personate waiters. Thistle is also a name in some parts, not of Scotland, as we may suppose, but of England.

Another wild plant, plantago lanceolata, the ribwort plantain, often called "fighters," or "fechters," from the flower heads being used in mock fights, by striking them against each other, secures for itself the names of "hardhead" and "soldier." Another name applied to it is said to be lamb's tongue, a term also applied to a garden stachys.

The wild iris (iris pseudacorus) is frequently known in our district as segg, an evident corruption of sedge, and the same plant is said to bear the name of levvers, also applied to a grass which is found on some marshy grounds. Other names for this yellow iris are flag-flower, corn-flag (properly belonging to the gladiolous), water lily, dragon flower, and dagger flower. The names of gladdon, gladder, and gladwyn have also been given to one of the irises, correctly to I. fœtidissima, which does not, so far as I remember, occur in our counties.

When we come to the name of bachelor's buttons, familiar to many, we are upon very uncertain ground. As already mentioned, this name has been applied to the burs of the burdock, but quite a discussion has been raised as to what is the true bachelor's button. In my early days I have heard it applied to the flowers of the double form of ranunculus aconitifolius, known best, perhaps, throughout the kingdom as "Fair Maids of France," from the fact of the plant having been introduced from that country. The true bachelor's button is, however, I believe, the double form of ranunculus acris, the common buttercup or crowfoot, but it has been rather indiscriminately applied to the flowers of other double-flowered ranunculuses. The single ranunculus acris, which is generally called

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simply the buttercup with us, and not the crowfoot by the people at large, has elsewhere the names of King's cup, gold cup, gold knobs, leopard's foot, and cuckoo bud. With us yellow flowers of similar character, such even as the lesser celandine, immortalised by Wordsworth's well known lines, generally bear the name of buttercup, and I have even heard it applied to the marsh marigold, caltha palustris. We have thus nothing so poetical as the Italian "Spouse of the Sun," applied to our marsh marigold, which, however, is said to have been the flower alluded to by Shakespeare in the words, "And winking Mary-buds begin to ope their golden eyes." We all know the daisy as the gowan, but I have also heard it called the curly doddie, but this was given by a man who had spent some years in Cornwall, where, I believe, from a curious poem in the vernacular of that county which once came under my observation, it is used for another flower, apparently of the buttercup or crowfoot family. The dog daisy is chrysanthemum leucanthemum, while, as we all know, another of the same genus is not, as we might expect, the corn daisy, but the corn marigold. Then the lucken gowan is a member of still another natural order, as it is the trollius, also called the globe flower, and said to bear in some parts of Scotland the name of witches' gowan. It was also known as the troll flower, a term probably, like the preceding one, derived from its acrid juices being used by the malignant beings, the Trolls and witches. Globe crowfoot and globe ranunculus are also names of this pretty native plant.

We are all familiar with crawtae as our Scottish appellation of the wild scilla or wood hyacinth, which is also the blue-bell of England, although it has been called there by the old herbalists the hare bell or hare's bell, and some think that it was the "azure harebell" of Shakespeare. It is the culver keys of Izaak Watson.

Few of our wild plants have had so many popular names as verbascum thapsus, our wild mullein, and a conspicuous object near Arbigland on the beach of the Solway. I have never heard it called locally anything but "a mullin," but with some other plants I believe it is also called Aaron's rod. Shepherd's gourd is another name I have heard given to it, but that was used by a person of more northern origin. Torches, hedge taper, high taper, and hig taper are all names it has borne, originating from

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the resemblance of the plant to candles used in churches, at least so say some authorities, while others say that it was because the stalks were used as torches at funerals after being dipped in suet. The name of hig taper became corrupted into hag taper, because of a belief that it was used by witches when working their spells. Another name for the mullein was flannel flower, because of the woolliness of its leaves and stems, this tomentum being dried and used as tinder. Bullock's lungwort was another of its cognomens, while the modern Romans are said to speak of it by a name which signifies "Light of the Lord."

The common mugwort, which some say was itself originally a corruption of motherwort, of our fields is simply corrupted into muggart, but I am told that a popular name in Wigtownshire was bowlocks—for what reason I cannot form any idea. The plant has many virtues attributed to it, and an old Scottish legend, which tells how a mermaid of the Clyde exclaimed, on seeing the funeral of a young girl who had died of consumption, may be quoted. It runs thus:—

If they wad drink nettles in Maroh
An' eat muzzart in May,
Sae miny braw maidens
Wad not go to clay.

In one part of Russia it is said to be called by a name signifying the herb of forgetfulness, while in another it is called simply bech, from the belief, derived from an old legend, that when a horse steps on the mugwort the plant moans "Bech, bech."

Briza media, that pretty little grass, is called with us simply shakin' grass, but elsewhere it bears such titles as cow quakes, dotherin' or dodderin' dicks, tremlin' grass, quakin' grass or ladies' hair, the last being also one of the names of stipa pennata, the feather grass, and more appropriate as applied to it than to the briza.

Achillea ptarmica is well known here as the wild yarrow or sneezeurrt, but it has also borne such names as goose tongue and wild pellitory; while achillea millefolium, the common yarrow, has had several designations besides that of milfoild. From being used as a cure for bleeding at the nose it was called nose-bleed, and it was also old man's pepper, and the soldier's woundwort.

We are familiar with southernwood, or old man, as popular

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names for artemisia abrotanum, and the former has been corrupted into sutherwood or sidderwud. Other names are boy's love, lad's love, and, one I have not heard used, but which I saw in a newspaper, from the pen of an Exeter writer, is maiden's ruin. Wormwood is familiar enough, but the French "garde robe" is interesting as derived from the uses of the plant to protect clothes from moths.

The goat's beard, or tragopogon, is not familiar to the people as a whole by name, but I have no recollection of hearing anyone call it what some do, either noon-day flower, star of Jerusalem, Joseph's flower, or that appropriate, if somewhat imperatively stated one, go-to-bed-at-noon, which it has received because it closes at noon. Noon flower is elsewhere applied to the mesembryanthemum.

The cow has supplied a portion of the names of a good number of plants. Among these we have, of course, the cowslip, the exact origin of which is open to discussion, but a good authority considers it is derived from an old Saxon term. A north of England name for the cowslip is coostropple, "that is the cow's throat or thropple, deeper than the cow's lip." I give this for what it is worth. It has also been called paigle and petty mullein, while a Kentish name was fairy cups. The cowslip of Jerusalem was the common lungwort, pulmonaria officinalis, which has also had such names as sage of Jerusalem, sage of Bethlehem, and wild comfrey. Our common name of lungwort was derived from its spotted leaves being understood to denote that it was a cure for diseased lungs, according to the doctrine of signatures. We all know cow parsnip as the common name of the heracleum, but hogweed is a less familiar one, and cow keeks, and kelks or keeks, although said to be current in the north of England, has never been used in my presence anywhere. The purple clover is called by some cow grass, and it is also called wild sookies and zizzag, but none of these are current with us, I believe. The cowberry is vaccinium vitis idæa, the red whortle berry.

The cowberry, empetrum nigrum, has a few other names, such as craa crook, and crakeberry, but I have not heard of these in our own locality, and in some parts the lady's fingers, the anthyllis, has the name of crawnebs.

The violet or heart's-ease, as represented by wayside and in

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garden by the wild violets and pansies, is not known with us by the many titles it has elsewhere in Britain and on the continent, and, poetic as is our term of heart's-ease, it is not so quaint as some of the following:—Herb trinity, forget-me-not, three-faces-under-a-hood, love-and-idle, love-in-idleness, live-in-idleness, call-me-to-you, flamy, pink-o'-my-John, tittle-my-fancy, kiss-me-ere-I-rise, kiss-me-at-the-garden-gate, jump-up-and-kiss-me, or cuddle-me-to-you. The name of love-in-idleness has Shakespearian sanction, seeing that Oberon tells Puck to procure for him the little western flower, called by maidens love-in-idleness. A north-east of Scotland and Scandinavian word for it is step-mother; while the old Saxon names for the violet were simmering wort and banwort.

Most of us are familiar with the name lady's smock, for cardamine pratensis, but not many in our district know of it as the cuckoo flower, so given because, as Garard tells us, it flowers when "the cuckoo doth begin to sing her pleasant notes without stammering." A purely Kirkbean name, at least so far as I can learn, for this plant is carsons, but why applied I can never ascertain, except that it may be considered that it only grows on carse land.

Centaurea nigra is called the horse-knot, a name which seems with us to be applied to other members of the genus, as I have heard centaurea montana spoken of as the horse-knot, and also as the blue bonnet. Other names for centaurea nigra are hard-head and iron-head. Cornflower is, however, fast creeping in as the name for almost all the centaureas, but we have, of course, the blue-bottle, bluet, blue-blow, and hurt-sickle as applied to them.

Wandering sailor is rather vaguely used for at least three plants to my knowledge. These are lysimachia nummularia, the moneywort; saxifraga sarmentosa, the mother-of-thousands; and sedum reflexum, one of the stonecrops. I have also heard sedum oppositifolium called deil's barley and daun'rin' Kate; while, as you all know, saxifraga umbrosa is the London pride or none-so-pretty, corrupted into Nancy Pretty. It is also Prattling Parnell, St. Patrick's cabbage, and Queen Anne's lacework. According to a Devonshire writer, the local name of this plant about Exeter is the lengthy one of "Meet me, love, behind the garden door." I may observe that the name of London Pride has nothing to do

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with its former or present popularity in London gardens, but was given because the plant was introduced by London, a partner of a celebrated firm of London florists called London & Wise, who were royal gardeners, and who published several gardening works about the beginning of the eighteenth century. Here are several other names for this old-fashioned flower:—Bird's-eye, garden gate, an abbreviation of kiss-me-love-at-the-garden-gate—a pansy name, if you remember; kiss-me-quick, look-up-and-kiss-me, chickens, pink, Prince's feather. With us I only know of Nancy Pretty, None-so-pretty, and London Pride being used.

I have referred to linaria cymbalaria being among the plants called Wandering Sailor. It has several other appellations, such as Kenilworth Ivy, because said to grow on the ruins of Kenilworth; butter and eggs, properly applied to linaria vulgaris, however; rambling sailor, pedlar's basket, and mother of millions. Saxifraga sarmentosa, formerly mentioned as the mother-of-thousands, is also the spider plant and the poor man's geranium. In Somerset I am told that corydalis lutea is also the mother-of-thousands; while tradescantia virginica is the spider wort, and also, in some parts of the south of Scotland, the life o' man.

I have heard the charming lotus corniculatus, the bird's foot trefoil named lady's fingers, which belongs to the anthyllis before referred to, but it is also said to be eggs and bacon, from the colour of its flowers. An authority on the subject calls it butter-jags, which he thinks may be a corruption of buttered eggs, but it is difficult to distinguish anything which would account for such a gross corruption. Of course, most of us know the double narcissi—which are butter and eggs and eggs and bacon—as well as their sister flower, which is the codlings and cream.

When we come into what may be called the names derived from comestibles, we enter a wide field, and a few references to these must conclude this instalment of my subject. I do not suppose any of us here have ever heard the primrose called the butter rose, doubtless caused by its colour, nor the ox-eye or dog daisy the butter daisy, but, of course, many of us will know the flower or leaf-buds of the hawthorn as bread-and-cheese. The common wood sorrel, with us cuckoo's meat, is in some places cuckoo's bread-and-cheese.

Most young children know well the sourock or sourick, which

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has a considerable number of other names, such as soursauce, greensauce, soursuds, sourgrabs, sourdock, and soursabs.

Others must be left for another time, if you should care to have them, and, if so, I would bespeak your assistance and that of others in endeavouring to compile a complete list of local plant names.

24th March, 1905.

Chairman—Mr JAMES BARBOUR, Vice-President.

NEW MEMBERS.—Mrs Wilson, Castledykes Cottage, Dumfries, and Mr Robert Service, jun., Janefield, Maxwelltown.

EXHIBITS.—From Mr Beattie, of Davington, Eskdalemuir, a finely-designed flint arrow-head and a bead, found when digging foundations of new Magnetic Observatory at Eskdalemuir. Mr Service explained that the bead was apparently of the kind found in the grave mounds of the Saxon period. From Mr Thomson, Hole-i'-the-wa' Inn, silver chain-worn by Deacon of Weavers; from Mr George Irving, Corbridge-on-Tyne, parchment, dated 1794, being a declaration of loyalty signed by inhabitants of the parish of Closeburn, and a document from Francis Carlyle, grand-uncle of Thomas Carlyle, to the trustees of Mr Sharpe of Hoddom. The following are copies of Mr Irving's exhibits:—

(a) Declaration of Loyalty by the Inhabitants of Closeburn Parish.

"We whose names are hereunto subscribed do solemnly declare that we are firmly attached to our present happy constitution as established in King, Lords, and Commons; that we detest all those principles which of late have been attempted to be disseminated in this kingdom by wicked and designing men tending to subvert all regular government and to introduce anarchy, and that we will assist the Government in repelling all foreign enemies and assisting the civil magistrates whenever called upon for suppressing of riots and tumults within the county of Dumfries." Endorsed on the Declaration there was the following note by Thomas Kirkpatrick, D.L.:—"None of the

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signatories shall be bound or desired to go out of the county, but in case of actual invasion."

(b) To George Muir, Esq., Writer to the Signet, Edinburgh.

"Sir,—Francis Carlyle, late commander of the King's Excise Yacht at Portpatrick, presently possesses a house and cow's grass at Yetts, a farm belonging to Mr Sharp of Hoddom. The tack of this farm expires at Candlemas next, and as the said Francis Carlyle is desirous of taking a lease of this farm to commence at the said term from you and the Gentlemen Trustees appointed for Charles Sharp, Esq., I hereby offer you nine shillings pr. acre for a lease of nineteen years of rent for said farm (a small piece of moss ground being about 1½ acre to pay no rent but to be given in the bargain). And as the house he presently possesses is in a ruinous condition and stands in great need of immediate repair, He is willing to repair the same at his own expense providing you and the other Trustees will reimburse him of the expense thereof which will be about five or six pounds. In case you do not accept of the above offer for the Farm and grant him a lease thereof in the above terms your communicating this to the other Gentlemen and letting me know if you and them agree to this proposal will oblige,

Sir,

Your most obedt. humble Servt.,

FRAS. CARLYLE."

"Edinbr., 19th Febry., 1773."

This Fras. Carlyle was grand-uncle to Thomas Carlyle, and is referred to in his Reminiscences, Vol. I., page 33, as "the Captain of Middlebie."

I.—INCORPORATED TRADES OF DUMFRIES. WITH SPECIAL REFERENCE TO THE WEAVERS. By Mr W. DICKIE.

I have elsewhere* presented some gleanings from the general records of the Seven Incorporated Trades of Dumfries. Recently I have had the opportunity of perusing the earliest extant minutes of the Weavers. The books in which they are recorded were in the possession of the late Mr James Muir, the last surviving member of the incorporation, and it is to the courtesy of his son-

* In "Auld Lang Syne" column of "Dumfries Standard."

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in-law, Mr Samuel Young, clothier, that I am indebted for access to them. I have also in my possession an eighteenth century volume of minutes of the Wrights or Squaremen, and to it incidental references will be made. The oldest of the Weavers' books is a substantial volume bound in rough calf-skin. If we could accept all the entries in it as literally accurate, it would be much the earliest record of any Incorporated Trade, not only in Dumfries, but in the kingdom; for four times in succession minutes are headed with the date 1074. It is, however, apparent on the most cursory glance that the scribe has misplaced the numerals, and that what he intended to write was 1704. The date of the actually earliest entry is 1654, and it is in the following quaint and rather confusing terms:—

"At Drumfreis the year off God 1654.—The quhilk day James Fergusone, Deacon, Thomas Pattersone, Trasirer, Robert Gibsonne, Nicoll Heslop, Johne Tomson, Richart Dun, Johnne Kennen, William Greir, masters, Thomas Willsone, officer, upon the twallt day of Agust the weivers' loft was fulie complit and was sat upon it. 1653 years."

The record refers to the erection of a gallery for the use of members of the trade in the old church of St. Michael, which was taken down some ninety years later, but it is not quite clear whether it was on the 12th of August, 1654, that the gallery was first occupied, or whether this was done on 12th August, 1653, and an omission repaired by inserting a minute on the subject in the following year.

The general records of the Dumfries Incorporations extend back to 1612. This minute book of the Weavers is the earliest known to be extant of any of the particular trades. Before proceeding to examine its contents we may recall several of the more saliant facts connected with the origin and functions of incorporations of crafts or trades as they existed in Scotland. These obtained their first statutory sanction in 1424, when an Act was passed by the Parliament sitting at Perth requiring that in every town of the realm the members of each craft should, with consent of the officer of the town, choose a wise man of their own number, "whilk shall be holden deacon or master over the rest for the time, to govern and assaye all works that bes made by the craftsmen of that craft, so that the King's lieges be not defrauded and skaithed in time to come as they have been

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in times bygane through untrue men of the crafts." This, it is believed, was only legalising a practice which had already been adopted more or less generally by various crafts. The Act recites one of the objects which such federation has in view, and the one which more directly concerns the common weal; to secure, namely, that the various tradesmen shall turn out good and honest work. But they served another purpose, and one which appealed to the stronger instinct of self-interest, by conserving and extending the privileges of the crafts, confirming their monopoly, and enabling the members to procure higher prices for their work. This motive seems at an early stage to have predominated to such an extent as to excite the alarm of the legislators, and three years afterwards the Act of 1424 was repealed, and craftsmen were forbidden "to summon their customary assemblies, which are believed to resemble meetings of conspirators." Instead of popular election, the Town Councils were to choose a Warden for every craft and "other discreet men unsuspect," who were to "examine and apprise the matter and the workmanship of ilk craft and set it to a certain price;" and if any man broke the price he was to be subject to a penalty. The Frankenstein of the crafts, however, was not so easily dealt with, and in 1491 it was found necessary to pass another statute against the election of deacons. The reason assigned was that it was "understood by the King and the Three Estates that the using of deacons of crafts in burghs is right dangerous, and as they use the same may cause trouble to the lieges by convening together and making laws of their craft contrary to the common profit, whereby when one leaves work another dare not finish it." The functions of deacons were to be strictly limited to the examining of "stuff and work wrought by the craft." And "masons, and wrights, and other men of craft who statutes that they shall have fee as well for the halie day as for the work day shall be indited as common oppressors and punished accordingly." Notwithstanding these fulminations the organisation of the trades became extended and consolidated. A common practice was for the Town Council to grant to a particular trade a charter of incorporation under the name of a Seal of Cause, sometimes also called a Letter of Deaconry. The records of the city of Glasgow show that such Seals of Cause were issued in the sixteenth century by the Town Council, with the concur-

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rence of the Archbishop of Glasgow; and that the Cordiners (or shoemakers) and Barkers (or tanners) had been incorporated prior to 1460, in which year their regulations were confirmed by the Council. These Seals of Cause provided that no person should "set up booth to work within this city until he be first made a burgess and freeman of the same, and be examined by three or four masters of the said craft if he be a sufficient workman and able to work good and sufficient work to serve our Sovereign Lord's lieges." The Shoemakers of Dumfries received a Seal of Cause from the Town Council of date 1st December, 1513, and no doubt others would be issued here, as in Glasgow and other towns, during that century. In many cases, where no formal charter was issued, trades enjoyed by prescription the same rights of incorporation. That was pleaded in the case of the Hammermen before the Town Council of Dumfries in connection with a memorable civic dispute in 1759. A saddler had in that year been chosen Deacon of the Hammermen. The deacons had seats in the Town Council, and objection was taken to his admission on the ground that the saddlers were only a pendicle of the Hammermen incorporation, not being named in the Seal of Cause constituting it, and were not eligible for election to office. The reply, which prevailed, was that there was no Seal of Cause, but that the incorporation rested upon prescription, and the saddlers had all along been recognised as constituent members entitled to the full privileges of the craft.

The numbers of the trades varied in different towns, and also the method in which they were grouped. In connection with Dumfries we are accustomed to the mystic number seven, but it had no special or universal significance. When the system was at its height there were in Glasgow fourteen incorporated trades; in Edinburgh, twelve; in Dundee, nine; in Perth, eight; in Aberdeen, seven; and in addition three separate societies—the Litsters or Dyers, the Masons, the Leechers (or barber-surgeons), each of which elected its deacon; and in Perth there were, in like manner, seven incorporated crafts and three "tolerated communities." In Dumfries the Wrights or Joiners Incorporation, which came to adopt the more collective name of the Squaremen, embraced all the building trades. We find, for example, mention of "sclaiters," "glasenwrights" or painters, and "coupers," as well as masons and joiners. The Weaver Trade compre-

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handed workers in cotton and woollen, dyers, or in the phraseology of the time "litsters;" and there is, of date 19th September, 1723, an entry of a peruke-maker, John Newal, being booked a freeman of the craft. The Hammermen included not only smiths and all workers in metal, but, as we have seen, such craftsmen as saddlers.

This method of organisation among craftsmen has passed away with the monopolist system which gave it birth; but in some places the semblance of it remains as a more or less picturesque survival. Of this we have an example in Kirkcudbright, where an annual election of Convener and Deacons is made. In others its forms are preserved for the administration of funds accumulated in the palmy days of the trades, and dedicated to benevolent or educational purposes. The most noted example of this occurs in the city of Glasgow, where the Trades House administers a property of close on half a million sterling, and the Deacon-Convener occupies ex officio a seat in the Town Council, in which all the trades were formerly represented.

Addressing ourselves now more particularly to the consideration of the records of "the Weaver Traid," as its title is therein written, it will be proper first to inquire what were the terms of admission. It was a pretty onerous probation which had to be passed before the position of Freeman was attained. The minutes are chiefly occupied with entries of the "booking" or admission of apprentices, journeyman, and freeman. By the terms of his indenture, as abbreviated in the minutes, the apprentice is taken bound to serve his master "honestly and dewtyfully," or "truly and honestly," for the space of five years. In some instances it is stipulated that he shall so serve "night and day" and both on "work day and holy days," or again "week day and Sabbath day;" and further that he shall not hear of his master's "skaith, but shall prevent the same to the utmost of his power." On the other hand, the master (who is in many instances the father of the apprentice) is taken bound to learn and instruct him "in all the points of the weaver trade known to himself," and which the apprentice "is capable to take up," and to maintain him in bed and board; sometimes it is added also in "habiliments." Cautioners are required on both sides for fulfilment of the contract. A fee was required at the booking of an apprentice, and in 1672 the amount of it was fixed

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at two merks Scots. The term of apprenticeship varied. Sometimes it is expressed as simply for five years; in other cases, for four years and "one year for meit and fee;" in others, as for "five years and the last year for meit and fee;" and yet again "for five years time and a year thereafter for meit and fee." In the case of the Wrights the term of apprenticeship was six years. It is in some cases entered as five years and a year thereafter for meat and fee; in others, simply as six years.

Having completed his indenture, the apprentice was next entered or booked as a journeyman to some freeman of the incorporation; and it was enacted, by minute of 20th December, 1705, that he should not be eligible for admission as a freeman until he had served three full years as journeyman, and given evidence thereof to the trade. That minute also created what may be called a grade of junior freemen, by forbidding any of that rank from taking an apprentice "till first he be four full years a freeman using his own employ." He might then hire one apprentice, but one only; for it is ordained—"further, it shall not be leisom to the said freeman so receiving the said first apprentice to take another apprentice till four years expire after the entry of the said first one," unless the first apprentice shall die or become incapable of working. Only in 1752 do I find mention of the fee charged to a journeyman on enrolment. It was in that year reduced to two shillings sterling.

The amount of the fees to be exacted at the admission of freemen was a subject of frequent regulation, and they were framed on a differential scale. Applicants were divided into three classes. There was first the son or son-in-law of a freeman. Secondly, there was the "town apprentice," that is, one who had served his indenture with a member of the incorporation. These were privileged classes. The third class, styled Neutrals, and corresponding to the "Extraneans" of some northern towns, consisted of those who had served their apprenticeship in some other place and did not stand within the privileged degree of relationship to any native freeman. A resolution of the craft of 22nd March, 1705, fixes the fee for admission of a Neutral at 100 merks Scots, being equivalent to £5 10s sterling, "by and attour the trade dues use and wont;" but if he should marry a freeman's daughter he "shall be admitted freeman by his said marriage for the price of £20 Scots," or £1 13s 4d sterling; and a freeman's

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son was to be admitted at the same lower rate. We learn, however, from an entry, in 1732, that £20 Scots was never exacted from the sons or sons-in-law, but only 20 merks. In August, 1715, the trade, lamenting the decrease in prices for their work, attributed this to competition arising from undue multiplication of masters, and in the hope of restricting the number they advanced the fee or "composition" charged to a town apprentice on enrolment as a freeman to £48 Scots, or £4 sterling in money, "by and attour drinking, dyner, head-washing, and other dues at such solemnitie of admission." Then in November, 1730, presumably with the same purpose, the fee for a Neutral was increased from 100 merks to £100 Scots. Again in 1736 the fees for admission in the case of a freeman's son are fixed as follows:—20 merks for his freedom; 5s sterling for his speaking pint; two shillings for his "asy giveing," and two shillings for his head-washing; "with a drink to the whole corporation after their admission, according as the Deacon shall please."

The term "speaking pint" has its equivalent in the phrase "standing his footing" applied to the entertainment expected of a new-comer in some trades. "Head-washing" had nothing of the sanitary process about it, but was very much of the same nature as the other, being defined in Jamieson's "Scottish Dictionary" as "an entertainment given as a fine by those who newly enter on any profession, or are advanced to any situation of trust or dignity; or who, like those who for the first time cross the line, have made an expedition they never made before." It was a penalty exacted on advancement to the office of Deacon, Boxmaster, or Master, as well as on enrolment as freeman; and in 1768 the General Committee of the Dumfries Incorporated Trades adopted a scale of commutation charges, directing that the money should be applied to the public funds of the trade and that the accustomed entertainments should no longer be given, as they were "a cause of great avoiation from business and loss of time, and have been attended with expense out of every individual's pocket present." This Act of the General Committee was recorded also in the minutes of the Weavers and of other individual trades. For a similar reason the Weavers at an earlier date (in 1742) had enacted that at the booking and receiving of apprentices or journeymen there should only be present the Deacon and Boxmaster and one or two of the Masters whom they

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shall call; and no money was to be spent on such occasions from the incorporation funds. This Act does not seem, however, to have been generally observed; for in 1753 we have record of a complaint made to the Seven Incorporations by a part of the trade that the funds were misapplied by unnecessary drinking and in other ways. They were prohibited from spending any money belonging to the incorporation "upon any account whatever, except upon the necessary affairs thereof," and the General Committee reserved to itself a power of audit of the accounts. They are also prohibited from paying out of the trade funds any expenses of law suits between individual members. Other trades were exercised by similar excesses. The Wrights, for example, found it necessary to restrict the spending at their Deacon's election to twenty shillings of the corporation's funds.

In the quotation which I made from a Glasgow Seal of Cause it was stipulated that a freeman of the craft must first be a burgess of the town. I do not find in the Dumfries trades records that such a condition was enforced. The general form of record is simply that the applicant presented a petition to be booked freeman, which was found reasonable, and he paid the composition and gave his oath of fidelity. In some cases it is further recorded that he "made his essay of work assigned to him to the satisfaction of all the members." One entry in the Wrights' records, of date January, 1774, does set forth regarding two masons that they "underwent their essay and produced their Act of Freedom as burgesses of the burgh, and were admitted and received freemen of the incorporation as masons on payment of the composition as Neutrals of £10 sterling each." But it is a solitary record of the kind.

A very interesting aspect of the Weavers' records is that which concerns the "Landward Freemen." The privileges of the incorporations had reference primarily, of course, to the area of the burgh. But Acts of the Convention of Burghs and of Town Councils, passed in the sixteenth century, sought to make their monopoly more effectual by extending their jurisdiction to the suburbs of towns and a radius of half-a-mile beyond the town walls; no craftsman being at liberty to follow his occupation within these limits without being enrolled as a freeman. The Brig-end of Dumfries, which we now know as the town of Maxwelltown, fell within this rule; and we have frequent mention in

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the early records of freemen both of the weavers and wrights resident there. It is also specially recorded, on occasion of an important meeting of the Weavers on 14th December, 1754, that the officer "had warned the freemen both of the town and Brigend and Troqueer," the last named being presumably the old village on Troqueer road. These were freemen apparently in full enjoyment of trade privileges, albeit not residents in the burgh of Dumfries. There is, it is true, one entry (of date 1745) that "Wm. M'Clamruch, weaver in Bridgend, desired to be admitted liberty to take out and bring in work without molestation, he obliging himself to pay to the box for the trade's behoof 2s 6d yearly for each loom he employs." It might be thought that this argued a disability on Bridgend freedom, preventing them from bringing their goods into Dumfries for sale; but it will be observed that the applicant is not designated a freeman, and it is probable that this is an exceptional arrangement with one who did not possess the status of freeman. He would be of the class designated "Stallagers," with whom we meet in minutes of 1790 and 1791. These minutes refer to persons "within the territory of the burgh," namely, at Stoop, Wallacetown, Gateside of Lochar, and Whinnyhill, of whom it was complained that they had been working as weavers "without being admitted freemen or making acknowledgement [i.e., payment] for their infringing upon the laws of the incorporation." They each "came in the trade's will" for an annual payment of 6s 8d sterling as stallagers. This is defined by Jamieson (who spells it stallangers) as a Dumfriesshire term "denoting a person, not a freeman, who is allowed to carry on business for a small consideration to the corporation to which he belongs, for the term of a year, in the same manner as freemen do."

There was another and a large class resident in the villages and rural district around Dumfries, who were known as landward or country freemen, and on whom the usual levy made was 4s Scots or a groat yearly. Among the places mentioned in which these country members dwelt are Carruchan, Holme of Dalsckairth, Teraghtie, and Leanside, in the parish of Troqueer; Ackencreith, Trench, Taylorland, Kelton, in the parish of Dumfries; Colledge, I presume in Terregles; Braecroft and Oakabush, in Terregles; Conheath, Hiemaynes, Woodend, in Caerlaverock; Gateside, in Holywood; Holywood Kirk; Dalswinton,

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Dincow, Kirkton, Carzield, in Kirkmahoe; Dalquharne, in Irongray; Lowghruton, Newabay; "Thorall," Dunscore, Glencairn, and Tynron parishes; Bruntshiells, in Tinwald; Brantinsylle, in the parish of Reveill; Nymbelly, which I take to be in Kirkbean. The terms of enrolment sometimes are that these men are to be "free of the said trade in the country only;" sometimes that they are to be free "to bring and take out work," to the town that is; but the variations in form do not seem to indicate any substantial distinction. In the case of John Aikine, one of the weavers resident at "Ackencreth," the permission to bring in and take out work is limited to four hours each market day; and it is expressly stipulated in this entry that he shall make the work "good and sufficient, at the ordinar and common prices, without less or more, and that he shall inform of all unfree traders." It is a pleasing picture which is brought before us of little industrial colonies dotted all over the district, and carrying on commerce with the town, albeit under restrictions which are not in consonance with modern ideas.

I will quote in extenso a minute of date 3d April, 1702, because it points to the establishment—or contemplated establishment—of some new departments of the weaver's trade in Dumfries, and also because it illustrates the detailed regulations and restrictive methods of the period, in limiting the number of persons employed and forbidding even freemen to practice any but their own particular branch of the craft.

"On the petition of Chas. Bowman, weaver in Air, to be freeman with the corporation of weavers in weaving of plush, damask, Dornick [that is linen cloth used in Scotland for the table], and flowr'd work, for which end he has resolved to come and make his residence within this burgh, and to submit to qt. composition [what payment] the Deacon and Masters shall exact of him. The Deacon and Masters after consideration thereof and for the petitioner's encouragement do unanimously admit and receive the said Charles to the freedom and privilege of their trade and incorporation for his working and weaving allenerly [only] of plush, demass, Dornick, and flowr'd work, with power to him to set up and use and practice his trade and vocation; declaring that after two years succeeding his settlement he may take prentice and journeymen according to the custom of trade. Yet that it shall be leisom to him immediately

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after upsetting in the place to take to himself a man or boy for his service in the said four points of work. And for his further encouragement do modify the composition for the box to 20 shillings sterling, which the said Charles by his acceptance of his freedom by thir presents obliges him and his heirs and executors to pay to the use of boxmaster for the time in name of the trade at his convenience after his upsetting. The said Charles Bowman being present personally accepted the said freedom and gave his oath of fidelity and fraternity, to maintain, assist, and defend the incorporation and all its members in the whole immunities, and to obey the Deacon and Masters in all things reasonable and customary during the time of his enjoying the said freedom."

There is no record of this minute having been rescinded, as there is in the case of some others; but it has been scored out by drawing the pen through it. It may be that the trade repented of extending its privileges to a stranger; but more probably Mr Bowman had reconsidered his position, and resolved not to settle in Dumfries. It will be observed that his "composition" was not to be paid until "after his upsetting."

II.—KINNELHEAD TOWER. By Mr J. T. JOHNSTONE, Moffat.

The ruins of Kinnelhead Old Tower, which are in the immediate proximity of the farmhouse of Kinnelhead, show it to have been a large and important building in its day, but it has this strange peculiarity that nothing authentic seems to be known about its history. Its name does not appear in any list of the antiquities of the district, as the Statistical Account for 1792 and Dr Singer's "Survey of Dumfries," published in 1812. Neither does it appear in the Buccleuch and Annandale papers published by the Historical MSS. Commission. No reference is made to it as a tower or residence in the Annandale Family Book, and but two references are made to the lands of Kinnelhead in the index of places in the Family Book. The first reference is that in 1568 John Johnstone of Glenkill renounced in favour of Sir John Johnstone, Knight, the lands of Armynie, in the Stewartry of Kirkcudbright, with the lands of Kinnelhead and Holmschaw, in Annandale, to be occupied by him without condition. The other reference is in 1609, when

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James Johnstone, first Earl of Hartfell, acquired from Robert Johnstone of Bearholm the lands of Easter Kinnelhead. In Grieve's Guide to Moffat there occurs:—"At one time Middlegill was the principal seat of David de Lindesay, Baron of Evandale, whose peel house stood at Kinnelhead." On communicating with the authoress of this guide, she could give me no definite information as to where she got the statement I have quoted. The Lindsays at one time owned land in this neighbourhood, but their principal seat was at Crawford, where the ruins of their castle are still to be seen; so that it seems very unlikely to have been built by any of that family. The site of the ruins is about two hundred yards or so west from Kinnel Water. It is surrounded by very rough and rocky ground, having generally a slope to the Kinnel. The north and south walls have been sandwiched in between two natural mounds or hillocks, which rise from ten to twenty feet above the general slope of the ground, the tailing of the mound slopes being cut away to allow the walls to be built. The space between the south wall and the first division wall has been excavated much deeper (probably to form a cellar or underground apartment of some kind) than any of the other divisions shown on the accompanying plan. This cellar has become filled up with stones which have fallen from the walls, and I am unable to state how deep it is to the original floor level. The first division wall (that is counting from the south) is founded on the top of the solid rock, and on the south face of this wall the rock is shown as a perpendicular cliff about 6 feet high before the stone wall begins. The building has been originally divided into three compartments, the centre one being nearly double the width of the other two. Outside of these places there appears to have been a walled-in outer court of considerable extent, and at the south-end of this court the foundations are seen of a small square off-shoot, the purpose of which seems to have been to cover the entrance to the court and buildings, as there are traces of a roadway leading to this part still visible. From the east wall of this off-shoot the foundations of a wall 4 feet 6 inches in width can be traced southwards for 238 feet. Small portions of the west and division walls are all the faced masonry that remains, although the sites of the others shown on the plan can still be clearly made out. A great number of the stones at present seen in the walls are of cyclopean

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proportions; as, for instance, more than one stone can be measured as 6 ft. 6 in. by 2 ft. 6 in. by 1 foot 8 in., and a few at 3 ft. 6 in. by 3 ft. 6 in. by 1 foot 6 in. And there is one fallen from the walls and lying in the centre compartment which measures 6 ft. by 4 ft. 8 in. by 2 ft. The photograph shows a number of these large stones. There is a spring of water in the outer court. In conversation with a gentleman who was a farm servant at Kinnelhead over 60 years ago I gathered that the ruins then were just similar to what they are now. The Gallowhill, Moffat, and the Bleeze Hill, Wamphray, two of the Annandale beacon hills, are visible from the ruin, and it is surrounded by the ruins of four other towers at nearly equal distances. These are Lochwood and Auchencass, Kirkhope on Daer Water, and Locharben on the west side of Queensberry. (These two last towers were built by Sir James Douglas of Drumlanrig previous to 1578.) There can be no doubt that the ruins are the remains of a stronghold which must have been of some importance in its day, and it seems strange that it should have been passed by without some notice from the former antiquarians of this district, such as Dr Singer, etc.

(The plan and photograph are in the Society's collection.)

20th April, 1905.

Chairman—The PRESIDENT.

EXHIBITS.—From Mr Lockerbie, Chemist, a nestling pigeon with two heads; from Mr Lauder, gamekeeper, Barnbarroch, a very fine stone celt, found recently by Mr Lauder in a newly ploughed field at Barnbarroch; from Dr Martin, Holywood, a sixpenny piece of the reign of William III., dated 1696, found on the road at East Cluden; from Mr R. Service, a number of specimens illustrating the following paper.

THE RARER BIRDS OF THE SOLWAY AREA. By Mr ROBERT SERVICE.

I have found it just a little difficult to define a "Rarity," and to make up my mind on the question of inclusion or exclusion. The rarity of to-day may be the commonplace species of

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a few years hence, or the ordinary every-day things of this year of grace may ere long be, alas! verging on extinction.

Thirty years ago the stock dove was a very great rarity—it passes us daily without notice now. Ten years earlier than the apparition of the stock dove, a starling's nest was the wonder and talk of a whole district—one wonders now where all their vast hordes find a living. When I was a boy the chough was to be seen fairly numerously all around our Galloway shores, now you may wander from the Heughs of Colvend to the precipices above Portpatrick, and it will be a note well worth booking if you see a single example, yea, even in many rambles. These are instances of the rise or fall of species from purely natural causes. The relative numbers of any species are always in a state of ebb or flow, but the process is in the great majority an exceedingly slow process, and is only seldom so marked as in the cases quoted. The occurrence of rarities points, like index fingers, to changes in prospect. These may be attributed to one or other of several things, that the particular species is (1) more or less voluntarily altering its direction of migration-flight, owing probably to some varying meteorogical condition; (2) widening or lengthening the area of its seasonal occupation; (3) for some more or less inscrutable reason getting into questionable migration company, and being led astray into strange areas, not intended and unsuited for the species; and (4) in the case of the so-called gypsy migrants, they are the scouts and forerunners of species desirous of a temporary sojourn only. It is thus obvious that the occurrence of rarities opens up a most interesting field of study in many directions, and at the migration seasons more especially they point out to us the meaning of much that is going on which would be otherwise obscure.

Whether attributable to our geographical position or to the far more likely cause—scarcity of observers, the fact remains that Solway is, perhaps, the poorest area in Great Britain in its record of rarities. Comparing Solway with its two neighbour areas, Lakeland and Clyde, I find that in Lakeland they have 28 rarities that we have not got, while we have only seven that they have not recorded. In Clyde there are 13 more rarities than we have, and we have about nine that have not yet been recorded there.

I now proceed to give you my catalogue of Solway rarities,

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and have to explain that the selection of species has been of a rather arbitrary character on my part. I divide them into the following classes so as to give the subject a rather clearer view:—

I.

SPRING OR SUMMER VISITANTS.

The Golden Oriole—a really brilliant bird of tropical appearance, closely allied to the thrushes. It comes to Great Britain with considerable frequency, and if left alone by the Kentish cherry farmers would certainly breed there, but so far north as this it is one of the greatest rarities we have. In fact there are only two occurrences—one near Sanquhar thirty or thirty-five years ago, and the other at Newton-Stewart within the last three years.

The White Wagtail—The continental form of the ordinary pied wagtail, but with a grey back, while ours has it black. Within recent years it has been found that a migration flight line of the white wagtail is along the west coast of England and Scotland, passing about the latter end of March, and proceeding by some convenient short cut up the west of our islands, so as perhaps to avoid the east wind, and on to the northern part of Scandinavia.

The Hawfinch was a rare bird about 30 years ago, but it has so rapidly increased that in many parts of England it is already a great pest on green peas. We have had three occurrences of the bird—one in 1869 at Newton-Stewart, another at Moffat three years ago, and only last season one was seen in Troqueer parish.

The Wryneck is one of the most interesting of our visitors, but its migration limits are strictly defined to a line which passes across the country somewhere in the latitude of York. There has been only two occurrences, both in Nithsdale, many years ago.

The Hoopoe comes to us very rarely now-a-days, and all the records we have are old ones.

Of the Lesser-spotted Woodpecker only one occurrence is known, namely, at Troqueer Holm, in 1860, and the specimen was in the possession of this Society till it became moth-eaten.

The specimen of the Roller shown is the ordinary south-

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eastern European form. There have been two occurrences here, one made known by Sir William Jardine in October, 1864, when he found its feathers after the bird had been devoured by a cat, and another got at Mabie by a party out shooting.

The Bee-eater is another of those fine south-eastern birds which make long migration journeys. We have one record, so long ago as October, 1832, near Kirkmaiden.

Pallas's Sand Grouse—Instances in 1863 and in 1888. It is one of the most interesting birds known. In 1888 there were numerous paragraphs in the newspapers of the great Tartar invasion. At that time we had rather more than our share of it, for a pretty large flock, at least 60 strong, was located for the whole summer on fields near Southerness, where no more suitable spot could have been got, because in its native haunts it is confined to open sandy wastes, where the sun shines with a fierce heat. When in full plumage long filaments extend for a foot and a half from the wings, and the same from the tail. Another curious feature of the bird is found in the rat-like pads it has for feet. They fly with great swiftness. At that time also some of the naturalist M.P.'s got a bill passed in hot haste for the preservation of this bird for five years, but it so happened that at that moment not a single bird of the kind remained in the country, the survivors no doubt having gone back to Chinese Tartary, and none have been seen here since.

The Black Winged Stilt has the distinction of having the longest legs of any known bird in proportion to its size. We might be a little proud of the fact that it was first recorded as a British species from a specimen got here.

Sir Robert Sibbald's "Scotia Illustrata" (1684) records that "this bird was sent to me by William Dalmahoy, one of the officers of the King's Bodyguard, who is very skilled in the history of birds, and who transfixed it by a spear in a lake near the town of Dumfries, where another was also afterwards stabbed, and lost by the carelessness of a soldier." It is interesting to note that the family of Dalmahoy is still serving its country in the same way as that old soldier did.

Of the Night Heron only one is recorded in this area, as taken in the river Cluden in 1825, and the specimen, which belonged to the late Sir William Jardine, is in the Royal Scottish Museum.

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The Whiskered Tern is an exceedingly interesting bird of the gull family. It was found in 1894 in the little loch at Friars' Carse, and I had it sent to Edinburgh, where it is one of the particular treasures in the museum, being the only one recorded from Scotland.

II.

AUTUMN OR WINTER VISITANTS.

The Great Grey Shrike—One of the butcher-bird family, a very rapacious lot, distinguished by their curious habit of catching bumble bees, mice, small birds, etc., and impaling them upon thorns for convenience in taking them for food. Every winter for a long series of years one or more visitants of the kind was reported, but during the last half-dozen years I have not been made aware of any more occurrences here.

The Mealy Redpole—One of the Arctic forms of the common redpole. It is bigger than our own, is of a peculiar mealy tinge, and only visits us when we have somewhat Arctic conditions of weather. We had them in 1879, again in 1895, and none afterwards occurred till the winter of 1900.

The Greater-spotted Woodpecker may have bred in this area at one time, but does not do so now, although there is more than a suspicion that it has bred in Eskdale in recent years, but in the ordinary way it never comes to us till early in the winter.

The Wood Sand Piper—An occurrence of this bird was recorded by Mr Bell of Castle O'er, who read an interesting paper on the subject to this Society some years ago.

The Green Sand Piper is of tolerably frequent recurrence now, although at one time a rarity. The Smellie Watson catalogue says of it:—"This beautiful little bird I shot on the marshy ground behind Carlingwark House, Castle-Douglas, when shooting snipes. On the wing it appeared so white that it resembled a snowball, and its flight was not unlike that of a common snipe, but not so quick. None of my friends in that neighbourhood had ever met with one of the species before. Sir William Jardine thought this a very fine specimen."

The Spotted Redshank is a very scarce bird, and it is only within the last few years that we were able to establish it as a real migrant here. Those acquainted with the cries of the wild fowl were quite convinced of having heard it, but until Mr M'Call

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shot a specimen at the mouth of one of the creeks at Carsethorn in October, 1900, its occurrence was not authenticated.

The Ruff is a bird of considerable interest for the part it used to form in the feasts in the olden time. In historical annals there are accounts of the feasts the bishops held when many thousands of fatted ruffs were served up.

The Little Stint is one of those Siberian birds which in their migration south pass through our area for a few days only early in September. Here in the Solway area we are a little too far west to get anything like a proper share of these birds from the Siberian and Russian regions. A closely allied species is Temminck's stint, which has occurred only once.

The Little Bittern is from the marshes of the Danubian region. Only one instance as far as I know has occurred. Another is alleged to have been got near Lochmaben, but I have not been able to authenticate it. I have a letter from the famous historian of the Cumberland birds, late Rev. H. A. Macpherson, whose untimely death a few years ago ornithologists have not yet ceased to deplore. In it he wrote of a little bittern which "was shot at a place called the Woodhouse, on the Kirtle river between Kirkpatrick and Kirtlebridge, by its present owner, Mr Sharp of Hodgson's Court, Cumberland Street, Carlisle, in the early summer of 1874."

Baillon's Crake—One specimen of this bird was got near Lochmaben by Sir Wm. Jardine in 1835, and another was got near Stranraer in 1875.

The Snowgoose is one of these American forms which we manage to get sometimes. There was a flock seen in 1881 in Cumberland, and one of these birds turned up in the nets at Newbie.

Of the Gadwall, one of the rare "teal" tribe of ducks, one was got at the mouth of the Nith.

Of the Garganey we have had at least two. One of them was got near Glenluce in 1879, and another later on at Kirkmichael. These are now looked after by sportsmen, so that, no doubt, we will get a fair proportion of the tame reared ones in time.

An exceedingly interesting bird is the Blue-winged Teal. In January, 1863, one was shot by the late Mr Shaw, a celebrated keeper on Drumlanrig estates, who was the first to investigate the

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sequence of life in the salmon by proving that the pars were really the young of salmon, who also introduced the roe deer into this district, and tried unsuccessfully the introduction of the ptarmigan, and was very successful in introducing the grayling. The bird he shot was sent to Sir William Jardine, and is now in the collection of the Royal Scottish Museum. Strange to say, no other specimen has ever occurred in any part of Europe, so that we have here an unique distinction.

The Roseate Tern is one of the prettiest of the species. While alive it shines with a brilliant gloss, and on the under side there is a rosy tinge, which fades immediately after death. It has been seen on Rough Island at the mouth of the Urr by myself and others.

The Grey Phalarope breeds far to the north, but as each recurrent October or November comes round, if we have at the time of migration a roaring north-western gale, we are certain to find numbers round our coast. At that time they are absurdly tame, and, if you happen to come on one in a little pool of water, it is a pleasure to see how innocently it looks up without fear of the human face.

The Red-necked Phalarope visits the Solway with extreme rarity, which is all the more curious as it breeds at two or three stations along the Hebrides and in Shetland, so that it must pass over this district, though it never seems to alight here.

A few of the Great Snipe have occurred from time to time, and one instance occurred last autumn at the Brae, Lochrutton.

The Black-tailed Godwit used to be a feature of the feasts in the olden time, but is now rare in this country. A few have been seen at the mouth of the Nith.

Of the American Bittern we have only three records.

Wild Swans are very interesting to the naturalist or lover of wild life. Three of them are known here—two with certainty. The whooper swan is seen when we have a sufficiently hard winter. It seldom comes before December, and those who hear its curious trumpet-like calls as it passes, flying in the midst of a gale or rising tempest, can never forget the feeling it engenders. It is compared to the sound of a pack of hounds in the distance, but there is something more weird and unearthly accompanying it than the cry of the hounds. In Northern Germany and Russia it is always said that these sounds are heard when the Demon

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Huntsman and his hounds are out, and the superstitious peasantry crouch closer round the fire when the ominous sounds swell on the rising gale.

Bewick's Swan is smaller and slimmer. One was got at Southwick, and was kept for some months until it recovered from a wounded wing, when one day it walked out to a knoll, rose in the air, and disappeared.

The Long-tailed Duck is very familiar as the "calloo" to those who journey up the West Coast in summer and early autumn, and it is so named from its call. Up till recent years, none were seen any nearer than the Ayrshire coast, but within the last ten or twelve years little parties have been finding their way round the Mull of Galloway into our waters, and a few have even got inside Southerness.

A very interesting species is the Velvet Scoter. Those who are at Southerness in the winter are attracted by the large flocks of black ducks diving into the water. One in five hundred is white-spotted on the wing, and such are not freaks but a distinct species known as the velvet scoter.

The Smew is another rare Siberian duck which visits us in the winter.

The Red-necked Grebe is scarce on the west, but common on the east coast.

Of the pretty Little-eared Grebe we have only one record locally, that of a pair shot in 1863 at Castledykes pool.

A specially interesting species is that of the Little Auk, which is found as far north as any navigator has penetrated towards the North Pole. We had, perhaps, a dozen specimens found in our area a few years ago at the time of what was called the "wreck of the little auk," when caught by a gale they were dashed against our shores, but since then it has not again occurred among us to my knowledge.

The Black Tern at one time bred in Cumberland, and threatened to breed in Solway Moss, but did not. Since then it turns up in the autumn months at odd intervals.

The Little Gull from the Persian and Caspian region shows a tendency to extend its migration far to the west in the early part of the winter, owing perhaps to the fact that here in the north-west part of Europe we have as mild a time during winter as anywhere on the continent.

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The Glaucous Gull, and along with it the Iceland Gull, are species of which we have only some very old records.

The Skuas, Richardson's, Buffon's, and the Pomatorhine. They are a curious race of rapacious gulls, which follow weaker ones, make them disgorge their prey, which they then seize before it reaches the water. Richardson's occurs most often, Buffon's is an occasional visitor, and the Pomatorhine is the least common.

Those who have had an opportunity of going on the Solway in a trawler or whammel boat will have seen the Fulmar, which comes within two or three miles of our coast, confining its feeding grounds entirely to the channel a few miles out. Along with it may be seen the Manx Shearwater.

The Black Guillemot has been suspected of breeding on the rocks at the mouth of Luce Bay, but the fact has not been authenticated.

The Storm Petrel and the Fork-tailed Petrel—Curious birds of ill omen, which follow vessels in time of distress. Occasionally on a very dark day in November I have seen the second named flying around Southerness point in small parties, evidently mistaking the gloom of mist and rain for the shades of evening coming on, most of them being nocturnal.

III.

BREEDING RARITIES.

The first I mention of this class is the Pied Flycatcher, which was supposed to be confined to Westmorland and Derbyshire, but within a short period of about 20 years it has been found breeding in our area. It is a specially interesting little bird.

The Lesser Whitethroat is of peculiar interest as a Scottish species. I remember reading in a paper given to this Society by a gentleman from Moniaive that it was pretty common round there, but whatever species may have been mistaken for it, it certainly was not the lesser whitethroat. In all my experience I have only met with it on two occasions, and although I have heard its peculiar note at times all my endeavours to get a local specimen have failed. A few months ago I addressed the Natural History Society of Glasgow, and said that probably Eskdale was the furthest northern station where the lesser whitethroat would be found fairly regularly as a breeding species.

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Following that, a gentleman from Hurlford wrote to the newspapers and said that was all nonsense, as any amount of them could be got there. Some of my friends in Glasgow were delighted to hear it, and the gentleman took them down to see the birds, but they turned out to be the common whitethroat.

The Turtle Dove is the subject of the inspired writer's beautiful description of spring—"The voice of the turtle is again heard in the land." It comes from Barbary and other countries of Northern Africa, and settles down in the sylvan shades of England, and if you ever listened to its soft melody there you would appreciate the poetic description to the full. It comes over the Border very seldom.

The Quail is the familiar bird of historic literature, but by no means well known to us in the bodily form. Long ago it must have been of annual occurrence, because old people will tell you how they listened to the calls of the quail in the summer evenings. During all my experience the quail has never been seen except in the fine season of 1893, when they suddenly descended on all the fields of ryegrass between Cumnock and Annan, and no one could understand what their peculiar calls were until the mowers discovered their nests. The chick shown is that of a quail taken on the farm of Rotchell.

The Spotted Drake shown was got at the pond of Terregles.

The Great Crested Grebe completes the list of breeding rarities. During the last few years it has been found breeding at Lochmaben and the White Loch of Myrtoun, where Sir Herbert Maxwell affords a refuge to all such.

IV.

HISTORICAL SPECIES.

Of the Crane, the Rev. H. A. Macpherson, to whom I have referred, wrote—I can find no evidence of cranes having ever bred in Scotland, but that the bird was well known in Scotland and much sought after in the sixteenth century is indisputable. As for instance the accounts of the Lord High Treasurer of Scotland contain the following:—"1503. Item, the XXI. day of December, to ane man brocht quik crannes and quik pertrikis to the King fra William Cunninghame of Dumfries—five shillings."

That is very interesting, but it must not be forgotten that

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country people called the ordinary heron a crane, and it is possible there may be some little confusion.

The Bittern—Nearly 300 years ago Dr Archibald in writing of the fauna of Dumfries mentioned biltour as found very frequently on the land.

The Chough shown came from Islay, but at one period it was exceedingly common round our shores from Colvend to Portpatrick. At present I am not aware that it breeds anywhere along our coast.

Ptarmigan—Up till 1825 these were to be found on our hill-tops. In the Dungeon of Buchan one was shot so lately as 1828, the last recorded. The late Duke of Buccleuch tried to introduce them at Wanlockhead, but there was a sequence of mild winters, and they disappeared.

V.

ACCIDENTALS OR CASUALS.

The Red-backed Shrike was only once found at Lochmaben.

The Waxwing, a curious bird, the appearance of which people long attributed to forebodings of war or pestilence, or other calamities, was long a mystery in the matter of the place of breeding, until in 1854 it was found breeding in great numbers in Lapland. It is very rare here.

Of Richard's Pipit there is an authentic occurrence as having taken place in Terregles.

The White-winged Crossbill is said to have occurred in Dunscore.

The Rose-coloured Pastor comes to us at long intervals from the Far East. It is said in Southern Europe to follow up the swarms of locusts, and feed on them, and is reckoned to be one of the means whereby the locust is kept in check.

The Nutcracker is said to have occurred in Wigtownshire a few years ago.

VI.

INTRODUCED BIRDS.

Of the Red-winged Starling we have only one occurrence, recorded in Sanquhar. No doubt it came from Inveraray, where, after the Marquis of Lorne's return from the Governor-Generalship of Canada, the introduction of 200 of the red-winged starling

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was a failure. They remained during the summer, and totally disappeared in the autumn when the migration fever set in.

The introduction of the Capercailzie was also a failure. The late Duke of Buccleuch proposed to introduce them at Sanquhar, and the eggs were successfully hatched, but the birds disappeared. Several years later a couple of specimens were found at Glenapp, no doubt stragglers from an introduction by the late Duke of Hamilton.

The Virginian Quail was introduced by Mr Shaw at Drumlanrig, but also disappeared. Had the proper conditions been observed it might have become one of the local species, because they have been successfully introduced in Norfolk and other English parts, and give good sport.

VII.

ALLEGED OCCURRENCES.

The Black-throated Thrush is a Siberian species which comes to England in very hard weather. One is said to have been seen at Kirkconnel in 1895 during the fearful snowstorm of that year.

The Black Redstart is alleged to have occurred and bred here, but I venture to think the statement was on totally erroneous grounds, because over and over again I have been asked to come and see its nest, and greatly to my disgust on every occasion it has turned out to be that of the common redstart only.

The Nightingale—Whenever a good warm dry summer occurs, when such species as the sedge warbler begin to sing at night, their songs are attributed to the nightingale, and we are sure to see in some newspapers a paragraph that the bird has been here—but not seen.

The Wood Lark, according to the Old Statistical Account, is said to have been seen in Dumfriesshire, but up to date it has not authentically been found here.

The Pine Grosbeak—There is a very interesting old record in the Statistical Account of Kirkmichael parish by Dr Burgess, a very well-known botanist, who gives the pine grosbeak as one of the birds of his parish, but contemporary writers also say that the crossbill was unusually common in Kirkmichael, so that no doubt he wrote down grosbeak instead.

The Green Woodpecker is said to have occurred at

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Munches, and is given in the very good and authentic list of Colvend parish, but not one of the European woodpeckers is less given to wandering, and those who say they have not occurred in Scotland are entitled to be heard.

The Great White Heron is said by two good naturalists, Mr Bruce, Dalshangan, and Mr M'Kie, Kirkcudbright, to have occurred on the Dee in the hard winter of 1879, and as specimens were got in England in that winter probably they were correct.

The Common Skua is a bird of which the Shetlanders are as proud as an English squire is of his pheasants. An old record says it is occasionally met with on the Solway Firth, but there is nothing to authenticate it.

The Ivory Gull, an Arctic species, is said to have been seen on the Solway Firth, but as an albino of the herring gull was got shortly after, there seems little doubt the record must be rejected.

2nd June, 1905.

Chairman—The PRESIDENT.

The President stated that a letter had been received from Mr J. A. Moodie, honorary secretary and treasurer, resigning these offices, and that the council had remitted to a committee to draw up a minute expressing the thanks of the Society for his services. The minute was submitted and approved of. It referred to Mr Moodie's services as secretary for three and as treasurer for sixteen years, and expressed the Society's appreciation of his services in these capacities.

It was also intimated that Mr Samuel Arnott had consented to act as interim secretary, and Mr Mathew H. M'Kerrow as interim treasurer. The appointments were unanimously confirmed.

NEW MEMBER.—Rev. James Law, South United Free Church, Dumfries.

EXHIBITS.—From Mr T. Hope-Bell, Morrington, tiles from Summer Palace, Pekin, a number of fossils, corals, gold quartz

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from Rosario, and other specimens; from Miss M. Carlyle Aitken, fruit of Bignonia, fruit of Brazil nut, Martynia fruit, together with a number of other valuable and interesting exhibits; from Mr R. Service, spray of common holly, showing four successive years' growth, flowers of Ixiolirion, specimen of Old Man Cactus—Pilocereus senilis; from the President, plants of Brodiæa ixioides, Œnothera tenella? from Chili, Œ. odorata, an Acæna, Camassia esculenta, etc.; from the Secretary, Lychnis diurna variegata and Arisarum proboscideum; from Mr Kennedy, teacher, Holywood, Soland Goose, captured in Holywood in 1902, and which he now presented to the Society; from Dr Martin, a photograph of a stone in Holywood Churchyard; from Mr R. Service, coins of reign of Queen Mary, found at Kirkcudbright, a coin found at Carruchan, a stone hammer found in Kirkbean, and one found in Holywood, and a specimen of the Cockchafer beetle; from Mr Charles Cumming, Dumfries, a large number of Roman and other coins; from Mr George Irving, Corbridge-on-Tyne, a burgess ticket of Lochmaben conferred on George Sharp, advocate, Laird of Hoddom, in 1731.

Interesting information regarding these exhibits was given by the President and others.

Mr Kennedy was thanked for presenting the Soland Goose to the Society.

Dr Martin contributed a number of valuable notes regarding the old stones in Holywood Churchyard, an interesting inscription from a figured stone in Irongray Churchyard, and several epitaphs from local churchyards.

EXPERIMENTS WITH CUTTING LEAVES OF PLANTS. By Mrs ATKINSON, Dumfries.

The following is an experiment tried on six plants, viz., a Schizanthus, a Hydrangea, a Geranium, a Primula, a Calceolaria, and a Cineraria, of cutting their leaves at the edge and across the centre of leaves. At first very little action took place; afterwards the leaves of the Schizanthus began to shrivel and curl up. Unfortunately, the plant got nipped by the frost, so no further observations were possible. In the case of the Hydrangea the cuts at the edge of the leaves became discoloured; those in the centre split up in an opposite direction to the cuts

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and looked somewhat dead at their edges. In about six weeks' time the leaves fell from the plant. The cuts on the leaves of the Geranium at first looked as though they were inclined to re-unite, very minute filaments formed at the edge of the cuts, looking as if they might knit the cut parts together again, eventually the leaves turned yellow, and dropped from the plant. The cut leaves of the Primula became very ragged at the edge of the cuts, the leaves became discoloured and decayed, and they finally shrivelled up and died. The centre cuts in the leaves of the Calceolaria spread in all directions, more so than the cuts at the edge of the leaves. After a time the leaves became limp, and the cuts becoming black, in the end the leaves died. The Cineraria's leaves that were cut curled up very much at the edges, the centre cuts had several little notches at the edges, they split away from the main cuts, and all the cut leaves died.

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FIELD MEETINGS.

On account of the number of papers, etc., it has been found necessary to condense the reports of the Field Meetings held in 1905, which were well attended, and, as a rule, of a highly interesting nature.

Lincluden College—10th June, 1905.

Lincluden Abbey was visited, and Mr James Barbour explained the history and leading architectural features of the College and the Abbey, which was originally built on the site.

NEW MEMBERS.—Rev. S. Dunlop, Irongray Manse, and Mr H. Leighton Hare, Lochvale.

Kirkconnel, Newabbey—24th June, 1905.

By kind permission of Colonel Maxwell Witham, the Society visited Kirkconnell, Newabbey, where the members spent a most enjoyable afternoon, inspecting the old tower and mansion, the gardens (full of interesting plants), and the fine grounds.

Colonel Maxwell Witham kindly entertained the party, which numbered about 40, to tea.

BUSINESS MEETING.

Chairman—The PRESIDENT.

Colonel Maxwell Witham, Mr R. Maxwell Witham, and Miss Maxwell Witham were accorded a vote of thanks for their kindness.

NEW MEMBER.—Dr Joseph Hunter, Dumfries.

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Thornhill, Penpont, and Glenwhargen—15th July, 1905.

About twenty members took part in this Field Meeting, the places visited being Dr Grierson's Museum at Thornhill, the ancient devotional cross at Boatford, Penpont Church and Churchyard, and Glenwhargen Craig. At the Museum, which was open to the party through the courtesy of the Trustees, Mr and Mrs Kerr were most attentive, and before leaving a hearty vote of thanks was accorded to them. Mr James Barbour acted as cicerone at the Devotional Cross, and pointed out its architectural and other features, drawing attention to the fact that it differed greatly from the engravings hitherto published. At Penpont Rev. A. Paton and Mr R. Robson acted as guides, and at Glenwhargen Dr Mair Robertson kindly provided a most enjoyable repast for the members present. At the close a hearty vote of thanks was accorded to Dr Robertson for his kindness in providing the refreshments, and for his assistance in making the arrangements, and also to Mr R. Robson for so much assistance willingly given in making the arrangements.

NEW MEMBER.—Mr Hugh Steuart Gladstone, yr. of Capenoch.

Lochmaben—29th July, 1905.

Despite a stormy day, about 20 visited Lochmaben, where Provost Halliday, Rev. R. Neill Rae, and Mr Cameron accompanied them round the principal places of interest. During the earlier part of the afternoon Rev. Mr Rae acted as guide, and a visit was paid to the old camp near the station, the site of the Roman road, a number of old buildings, and the Church and Churchyard. A visit was then paid to the Town Hall, where Provost and Mrs Halliday had kindly provided tea, and where the party was joined by Mr E. B. Rae, town clerk, who exhibited several antiquarian objects belonging to the ancient Royal Burgh.

After tea a short Business Meeting was held, when, on the motion of the President, seconded by Dr J. Maxwell Ross, Provost and Mrs Halliday were warmly thanked for their kindness

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and hospitality, and Rev. R. Neill Rae was heartily thanked for his services as guide.

NEW MEMBERS.—Mrs Murray of Murraythwaite; Mr Charles Palmer, Woodbank, Dumfries; and Mr J. Wilson, solicitor, Dumfries.

Birdoswald Camp, Lanercost Priory, Naworth Castle, and Brampton—19th August, 1905.

A considerable party travelled by train to Gilsland, where they were met by Mr F. Penfold, Brampton, who kindly acted as guide in lieu of his brother, Mr Henry Penfold, who had kindly drawn up the programme for the day. After seeing the Roman Wall near the station, and Mumps Ha', the party drove to Birdoswald Camp, which was inspected under the guidance of Mr George Irving and Mr F. Penfold. Driving along the Roman Wall, they proceeded to Lanercost Priory, where Rev. J. T. Willis, the vicar, kindly escorted them through the fine abbey, giving many historical details. The next halt was at Naworth Castle, permission to visit which had kindly been given by the Earl of Carlisle, and where the party had the privilege of being guided by Lady Cecilia and Mr Roberts, daughter and son-in-law of the Earl. Here a most interesting time was spent, and before leaving, on the call of Rev. W. L. Stephen, a hearty vote of thanks was accorded to Lady Cecilia and Mr Roberts for their great kindness.

A pleasant drive led to Brampton, where several places of interest were visited. Tea was partaken of in the Howard Arms, where a Business Meeting was held, Dr Martin in the chair. Votes of thanks were accorded to the Earl of Carlisle, Lady Cecilia Roberts, Mr Roberts, Rev. J. T. Willis, and to Mr Henry Penfold, Mr Penfold, senior, and Mr F. Penfold, the Secretary making special mention of the great kindness shown by the Messrs Penfold.

NEW MEMBERS.—Colonel Jackson, Springvale, Ayr; Mr R. Dinwiddie, Overton, Dumfries; Mr James Henderson, Braeside, Dumfries; Mr J. H. Nicholson, Airlie, Maxwelltown; and Mr J. Houston, jun., Marchfield.

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Moniaive District—9th September, 1905.

About 30 took part in this meeting, the party taking train to Crossford, where conveyances were in waiting, and where they were met by Rev. T. Kidd and Mr John Corrie, who had co-operated in making the arrangements, and who acted as guides to the company. The first visit was made to the private chapel of Sir Emilius Laurie of Maxwelton House, thence the company proceeded to Maxwelton House, the home of Annie Laurie, where a considerable time was spent in examining the fine old mansion and the interesting portraits and other objects of interest, Colonel Laurie and Mr Cecil Laurie kindly guiding them over the house. Sir Emilius kindly entertained the company to lunch, Sir Emilius himself presiding at the table, and afterwards gave a deeply interesting account of the history and associations of Maxwelton. On the motion of Mr M. H. M'Kerrow Sir Emilius was warmly thanked for his great kindness.

Resuming their seats the party proceeded to Glencairn Churchyard, where Rev. Mr Kidd pointed out the most interesting tombs, and drew attention in a most interesting way to the more notable of these. A detour was then made to pass Ingleston Moat, which time did not permit visiting, but a halt was made to allow of Mr Corrie giving an interesting account of what was known and surmised of this ancient moat. Passing through the pretty village of Moniaive, a visit was paid to Renwick's Monument, where Mr Kidd gave a short account of Renwick's origin and career. Thence the company proceeded to Caitloch, where a most hospitable reception was given by Mr James M'Call, who kindly entertained the company to tea. After tea a Business Meeting was held, under the chairmanship of Mr W. Dickie, when, on the motion of Colonel Irving of Bonshaw, a hearty vote of thanks was accorded to Mr M'Call for his hospitality, and to Miss M'Call and Miss Martin of Dardarroch for presiding at the tea table.

NEW MEMBERS.—Miss Mond, Aberdour House, Dumfries; Mr A. E. Johnson-Ferguson, yr. of Springkell, Wiston Lodge, Lamington; and Mr T. G. Armstrong, Rae Street, Dumfries.

Several interesting old books were examined at Caitloch, and a number of the party visited the Covenanters' Cave on the estate,

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while others spent some time in the pretty garden, and before leaving a photograph of the company was taken by Mr Kidd. On the return journey a short time was spent in the village of Moniaive, once a burgh of regality, and in examining the old Town Cross.

Dumfries and Maxwelltown Sewage Purification Works—23rd September, 1905.

The concluding Field Meeting took place on the above date, when a considerable number of members visited the Sewage Purification Works of the Burghs of Dumfries and Maxwelltown. Those at Dumfries were first visited, the company proceeding to the Castledykes, where Mr John Barker, sanitary inspector of Dumfries, kindly escorted the party over the works, and gave full explanation of the different steps in the purification of the sewage. Thereafter a short Business Meeting was held, under the chairmanship of Mr W. Dickie, when Mr John Barker was admitted as a member of the Society. On the motion of Dr J. Maxwell Ross a hearty vote of thanks was accorded to the Town Council of Dumfries for giving permission to inspect the works, and to Mr Barker for his courtesy and valued services in showing the party over the works. Crossing the Nith by boat, kindly lent by Mr Charles Turner, the company next visited the Maxwelltown Works, where Dr J. Maxwell Ross pointed out the leading features of the works and gave a number of explanations regarding the process in reply to questions. Mr Cruickshank, sanitary inspector of Maxwelltown, was also in attendance, and Provost Herries was present. On the motion of Dr J. W. Martin, the Town Council of Maxwelltown was thanked for permission to visit the works, and thanks were accorded to Provost Herries for his attendance, to Dr Maxwell Ross for his information and explanations, and to Mr Cruickshank for his services.

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DONATIONS

For the Three Sessions.

Reprint of Mr James Barbour's paper on Rispain, from Mr Barbour.

Old Implements used by workmen at Castledykes Old Quarry, discovered during excavations there, presented by Mr M'Kay.

Limelight Lantern and Screen from Professor G. F. Scott-Elliot.

A Collection of Minerals, Fossils, and Geological Specimens, also Ancient Coins collected in Egypt in 1864, from Miss Maxwell, Nunbank.

(1) Rules and Regulations of the Dumfriesshire and Galloway Benefit Society, instituted in London, 14th March, 1820. (2) "Dumfries Monthly Magazine," June, 1826. (3) "Reading made Easy," published in Dumfries, 1824. (4) "Bible Lessons," by Rev. Thos. T. Duncan, minister of the New Church, Dumfries, 1816. (5) "Dumfries Album," 1857. (6) "Report of the great Demonstration at Sanquhar on 22nd July, 1860. (7) Catalogue of the Society's Exhibition in the Mechanics' Hall, 1873. . From Rev. R. W. Weir.

Discharge and Assignation, dated 18th August, 1673, granted by Alexander Maxwell of Buittle, and William Glendonyng of Parton, in favour of Adam Wright, in Cairgane, and James Hutchison, in Troqueer, from Mr Thomas Fraser, Dalbeattie.

Portrait of the late Sir William Jardine, Bart. of Applegarth, from Miss Maxwell, Nunbank.

Fossil from Welsh Limestone, from Mr Bulkley Hughes.

Copy of the first number of the "Edinburgh Courant," February, 1705; a print from the "Gentleman's Magazine," of Old Bridge of Dumfries, in 1793. From Miss Henderson, London.

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Two MS. Volumes of Notes of Weather Observations taken at Dunscore from 1st January, 1884, to 31st December, 1891, from Dr Callander.

Burial Urns discovered in Maxwelltown Public Park, from Mr James Barbour.

From Mr John Maxwell, Tarquah—(1) Specimen of Native Cotton, grown in Sikondi; (2) Coffee Beans, grown at Tarquah; (3) Piece of Wood used by natives as a tooth-brush; (4) Specimen of Bush Creeper; (5) Report of Botanical Department of the Gold Coast Government for 1901.

From Mrs Thompson, Castle Street—(1) Historical Essay, by James Anderson, Edinburgh, 1725; (2) "Wallace or Fight of Falkirk," London, 1820.

Copy of Circular issued by Mechanics' Institute in 1859, from Mr Smith.

(1) Guide to the Gallery of Birds, 1905; (2) Guide to the Fossil Mammals and Birds; (3) How to collect Diftera; (4) Blood sucking flies and how to collect them; and 23 other volumes. From Trustees of British Museum.

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EXCHANGES.

Banffshire Field Club—Transactions, 1900-01.

Berwickshire Natural History Field Club—Transactions, 1901-1901-02, Vol. XVII.

Bureau of Ethnology of United States—Publications, Vol. 26; Bulletins, Nos. 95 and 96; 19th Annual Report, Parts 1 and 2, 1897-8; 21st and 22nd Annual Reports, 1899-1900 and 1900-1.

Canadian Institute—Transactions, October, 1902, No. 2 of Vol. VII., No. 3 of Vol. VII., No. 5 of Vol. II.; Proceedings, Vol. 7, Part 2, July, 1904.

Chronological Tables of Introduction of Tobacco into various Countries.

Cold Spring Harbour Monographs—I., 1903; II., Collambola of Cold Spring Beach, etc.

Davenport Academy of Science—Transactions, Vol. 8.

Edinburgh Geological Society—Transactions, Vol. 8, Sp. Part and Part 2.

Elisha Mitchell Scientific Society Journal.

Glasgow Natural History Society—Transactions, 1901-02.

Marlborough College Natural History Society—Report, 1901.

Minnesota Academy of Natural Science—Proceedings, 1890-91.

New York Academy of Science—Annals, Vol. 14, Parts 1, 2, and 3; Vol. 15, Part 1; Vol. 14, Parts 1 and 2.

Nova Scotia Institute of Science—Transactions, Vol. 10, Parts 1, 3, and 4.

Philadelphia Academy of Science—Transactions, Vols. 53 and 54; Proceedings, Vol. 54, 1902.

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Pulse and Rhythm, by Mary Hallock Greenwalt.

Rochester Academy of Natural Science—Proceedings, 4 monographs, Williamette Meteorite, March, 1904.

Smithsonian Institute—32 Monographs; 20 Monographs, from Report, 1903; Annual Report, 1901.

Staten Island Association—Vol. 7.

Stirling Natural History Society—Transactions, 1901-2, 1902-3, and 1903-4.

Sverige Antikvarish Tidshift, Vol. 17, Part 3.

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Vol. XVII.

THE TRANSACTIONS

AND

JOURNAL OF PROCEEDINGS

OF THE

DUMFRIESSHIRE AND GALLOWAY

Natural History and Antiquarian Society

FOUNDED NOVEMBER, 1862.

SESSIONS 1900-1901 TO 1904-1905.

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INDEX TO VOLUME XVII.

	Page.
Annual Meetings 1, 118, 237, 313,	367
Exchanges and Donations 1, 443	445
Field Meetings 109, 113, 223, 229, 365,	438
Parish of Luce (Hoddom)—*George Irving*	5
Vertebrates of Solway, a Century's Changes—*Robt. Service, M.B.O.U.* 11,	15
Meteorological Observations—*Rev. W. Andson* ... 33, 156, 265, 353,	378
Notes on above with Reference to Health—*Dr J. Maxwell Ross* 38, 271, 355,	384
Variation of Plants—*S. Arnott, F.R.H.S.*	41
Dr Archibald's "Account of the Curiosities of Dumfries" and "Account about Galloway"—*The late Dr James Macdonald, F.S.A. (Scot.)*	50
Bird Notes from Eskdale—*Richard Bell*	64
Forts and Connecting Trenches in Eskdalemuir—*Richard Bell* ...	76
Concerning the Market Cross—*James Barbour, F.S.A. (Scot.)*... ...	85
Scottish Burghal Life in 16th and 17th Centuries, illustrated by Extracts from Kirkcudbright Records—*William Dickie*	90
Etymology of Word "Ruthwell"—*E. J. Chinnock, LL.D.*	103
Botanical Notes for 1899—*James M'Andrew*	106
Mosses, Hepaticæ and Lichens of District, Addenda and Corrigenda of—*James M'Andrew*	121
Phenological Observations—*J. Rutherford* 125,	161
Lochrutton Crannog—*James Barbour, F.S.A. (Scot.)*	128
Pre-historic Forts near Dunscore, a Contrast in—*Rev. R. Simpson, B.D.*	136
Birds of Glencairn—*Dr J. W. Martin*	140
Phenological Observations at Moniaive in 1901—*John Corrie*	164
Fauna of Glencairn—*Dr J. W. Martin*	166
Edward I. at Sweetheart Abbey—*E. J. Chinnock, LL.D.*	172
Irvings of Hoddom, The—*George Irving*	175
Lag's Elegy and other Chap Books—*Frank Miller*	203
Geology of Dumfries Basin—*James Watt*	216
Cinerary Urn found at Holywood—*Dr J. W. Martin*	238
Nith and its Estuary, a Year's Observations of the Temperature of the—*Rev. W. Andson*	239
Lake Dwelling and Earthworks at Loch Urr—*John Corrie*	242
Toxic Effects of Colchicums on Bees—*S. Arnott, F.R.H.S.*	246
Lochrutton Crannog, Further Excavations at—*James Barbour, F.S.A. (Scot.)*	246
Greyfriars' Monastery, Dumfries, Excavations on the Site of the—*James Lennox, F.S.A. (Scot.)*	254

Digitized by Google

Evolution, The Ideas of—*Professor Scott-Elliot* 257
Comyn, The Assassination of the Red, from Contemporary Records—*E. J. Chinnock, LL.D.* 263, 298
The Sparrow Hawk—*Robert Service, M.B.O.U.* 273
Scottish Life in the 17th Century—*W. Dickie* 279
Burial Mound at Bogrie—*Robert Service, M.B.O.U.* 309
Arrow Heads and Stone Whorls from Townhead of Closeburn—*Robert Service, M.B.O.U.* 309
Pre-historic Red Deer of Solway—*Robert Service, M.B.O.U.* 309
Merkland Cross and the Rere Cross—*George Irving* 310
Trees—*Professor Scott-Elliot* 314
Edward I. at Sweetheart Abbey—*E. J. Chinnock, LL.D.* 318
How the Royal Burgh of Annan built a Bridge—*James Barbour, F.S.A. (Scot.)* 320
Diurnal and Nocturnal Raptorial Birds of the Solway Area—*Robert Service, M.B.O.U.* 327
The Snowdrop—*S. Arnott, F.R.H.S.* 339
Laws of Fines for the Presbytery of Dumfries—*Rev. R. W. Weir* ... 358
Scottish Words found in Old English Writers—*E. J. Chinnock, LL.D.* 358
Geological Notes—*James Watt* 359
Vestiges of the Castle of Dumfries—*James Barbour, F.S.A. (Scot.)* ... 362
Chile—*Professor Scott-Elliot* 368
Forests: Wild and Cultivated—*Augustine Henry, M.A., F.L.S., &c.*... 375
Biblical Money, and Coins of the Holy Land—*Rev. H. A. Whitelaw* ... 376
Burial Urns found in Maxwelltown Park 377
Japanese Larch and Larch Fungus—*W. Murray* 386
Birds observed on Solway—*R. M'Call* 388
Annan, Extracts from Burgh Records of—*James Barbour, F.S.A. (Scot.)* 390
Sedum Telephium—*W. M'Cutcheon, B.Sc.* 394
An Antiquary's Notes—*George Neilson, LL.D.* 395
Some Local and other Popular Plant Names—*S. Arnott, F.R.H.S.* ... 404
Declaration of Loyalty by Inhabitants of Closeburn 410
Letter from Francis Carlyle, grand-uncle of Thomas Carlyle 411
The Weavers' Incorporation of Dumfries—*W. Dickie* 411
Kinnelhead, Notes on the Ruins at—*J. T. Johnstone* 421
Rarer Birds of the Solway Area—*Robert Service, M.B.O.U.* 423
Experiments with Cutting the Leaves of Plants—*Mrs Atkinson* ... 436

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Vol. XVIII., Part 1.

THE TRANSACTIONS

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OF THE

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CONTENTS.

SESSION 1905-6.

	PAGE.
Annual Meeting	1
Presidential Address—Advances in Science—Origin of Vegetation in Nithsdale—*Professor Scott-Elliot*	2
Forestry—*Sir Herbert Maxwell, Bart.*	8
Natural History Notes—*Robert Service, M.B.O.U.*	20
Hoddom Bridge—*George Irving*	24
Double Polyanthuses and Primroses from Seeds—*S. Arnott*	27
Seedling Potatoes—*W. R. Farish*	29
Fauna of Glencairn. III. Fishes. *Dr J. W. Martin*	30
Old Dumfries Gleanings—*E. J. Chinnock, LL.D.*	34
Old Public Libraries in Dumfries—*G. W. Shirley*	39
Excavations at Moffat Sewage Works—*J. T. Johnstone*	44
Plants on St. Mary's Isle, Kirkcudbright—*Mrs Jeffrey*	46
The Castle of Dumfries—*James Barbour, F.S.A. Scot.*	48
Southern Nigeria, Notes on—*James Watt, M.A.*	93
Chrysanthemum Sport—*S. Arnott, F.R.H.S.*	95
Meteorological Observations for 1905—*Rev. W. Andson*	97
Excavations at Holywood—*Dr J. W. Martin*	103
Records of the Burgh of Lochmaben, Extracts from—*E. B. Rae* ...	104
The Vendace—*Robert Service, M.B.O.U.*	123
Irongray, the Kirk Session Records of, 1691-1700—*Rev. S. Dunlop* ...	127
Bees and Flowers, Discussion on	141
Note on the Taste of Bees in Colour—*Professor Scott-Elliot*	141
Rooks' Nests—*Mrs Thompson*	144
The Java Bean—*Professor Scott-Elliot*	146
The Vendace—*Robert Service, M.B.O.U.*	149
Fishes in the Solway Area, Seasonal Movements of—*R. Service*... ...	149
The "Kerr" of Moffat—*John T. Johnstone*	152
Lockerbie in its Origin—*Thomas R. Henderson*	155
Bonshaw Tower—*Colonel J. B. Irving*	164
Gold Mining on the Gold Coast—*John Maxwell*	169
Gypsies—*Andrew M'Cormick*	171
The Scoto-Norse Period in Dumfriesshire—*Rev. W. L. Stephen, M.A.*...	173
The Salmon Disease	182
The House of the Maxwells of Nithsdale at Dumfries—*James Barbour, F.S.A. Scot.*	186

Digitized by Google

PAGE

The Honey Bee—*Henry Marrs* 193
Bird Life and Bird Photography—*H. Steuart Gladstone, F.Z.S., &c.* ... 197
An Equatorial Star-Finder for Beginners—*J. Rutherford* 207
The Birthplace of Anna Laurie—*W. Dickie* 209
Phthisis and Sanatoria—*Dr J. Maxwell Ross* 212
Field Meeting—Borgue and Knockbrex 215
,, Moffat District 219
,, Bonshaw Tower 221
,, Springkell and Ecclefechan 226
Abstract of Treasurer's Accounts 234
Exhibits 236
Donations and Exchanges 240
Notices 241
Rules of the Society 243
Members of the Society 246

ILLUSTRATIONS.

Map, showing position of the Castle of Dumfries, facing page 48
Site of Castle of Dumfries, facing page 50
Ditch of ,, ,, ,, ,, ... 52
Stones found on Site of House of Maxwells of Nithsdale 190

ERRATA.

Page 50—Ninth line, read "demesne" for "royal."
,, 51—Delete third line.
,, 53—Second line should read "for work" instead of "forward."
,, 76—Transpose two last paragraphs.
,, 81—Fourth line, second paragraph, delete ninth word, viz., "quarters."
,, 89—Second line in fifth paragraph the word "minion" instead of "minor."
,, 93—Delete second word (Dumfries) in tenth line.
,, 93—Second last line read "farm" instead of "form."
,, 143—For Lezuminosæ, read Leguminosae.
,, 197—For 1·59 in., read 1-50th in.

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PROCEEDINGS AND TRANSACTIONS

OF THE

DUMFRIESSHIRE AND GALLOWAY

NATURAL HISTORY & ANTIQUARIAN SOCIETY.

SESSION 1905-6.

Friday, 6th October, 1905.

ANNUAL MEETING.

Chairman—Professor SCOTT-ELLIOT.

NEW MEMBERS.—Miss Smith, Llangarth, Maxwelltown; Miss Landale, Fernbank, Maxwelltown; Miss Watt, Crawford Villa, Dumfries; and Mr Francis Armstrong, Burgh Surveyor, Dumfries.

The reports of the Treasurer and Secretary were read, and approved, that of the latter showing a nett gain of nineteen members.

The following Office-bearers were appointed:—President, Professor G. F. Scott-Elliot of Newton; Vice-Presidents, Mr James Barbour, Mr Robert Murray, Mr Robert Service, and Dr James Maxwell Ross; Librarians and Curators of Museum, Rev. W. Andson and Mr James Lennox; Curators of Herbarium, Miss Hannay and Professor Scott-Elliot; Secretary, Mr S. Arnott; Treasurer, Mr M. H. M'Kerrow; other Members of Council, Mr J. T. Johnstone, Rev. John Cairns, Dr Martin, Mr James Davidson, Dr Semple, Mr W. Dickie, Mr W. M'Cutcheon, Rev. H. A. Whitelaw, and Mrs Atkinson; Auditors, Mr John Symons and Mr Bertram M'Gowan.

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It was remitted to the Council to appoint a committee to compile a Catalogue of the Antiquities of the District, with one to make a collection of photographs of the local antiquities, and to issue reply post-cards to ascertain the feeling of the members regarding the best evening for the meetings.

PRESIDENTIAL ADDRESS. By the President, Professor SCOTT-ELLIOT.

ADVANCES IN SCIENCE: ORIGIN OF VEGETATION IN NITHSDALE.

This last year has been eventful and epoch-making; at no time since the year of Waterloo has the world been so disturbed, but at the same time 1905 has seen an extraordinary advance in science. It is curious how events seem to crowd at the beginnings and middles of centuries. In 1605 Bacon published "Advancement of Learning," and "Don Quixote" also appeared. In that year France had just finished for a time, and Holland was still engaged in, the Wars of the Reformation. In 1656-58 there was war between France and Spain; Dunkirk taken by Cromwell; Cardinal Mazarin and Turenne were in their prime. Yet this was the flowering period of Descartes, Galileo, Copernicus, not to speak of Milton, Moliere, etc. In 1705 Blenheim and Ramillies were fought, and Halley had so far mastered astronomy as to predict the return of his comet, which appeared, up to time, in 1758. In 1756-7 Rossbach Leuthen was fought, England abandoned Hanover, whilst Linnaeus, Buffon, and Voltaire were in full work. 1805 was the year of Trafalgar and Austerlitz, and the same year saw Laplace's Celestial Astronomy and Monge's Algebraic Geometry. In 1857-8 the Indian Mutiny and Crimean War did not interfere with the publication of the Origin of Species. During this year of 1905 the Russo-Japanese War has, for a time at least, ended, but revolution in Russia, threatenings of civil war in Austria and Norway, have not ceased, and anxiety exists all through Europe and Asia. Yet this year has seen the first plain statement of a theory which, by its simplicity and by its boldness, far surpasses any previous conception of the human brain. That is the new theory of matter, lucidly explained by George Darwin at Cape Town and Johannesburg. That the supposed indivisible atom is really a world of itself, composed of hundreds of electrons. That these electrons cannot be called material

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particles, and consist of, or are charged with, negative electricity. That they are kept in their multitudinous and agitated orbits within the boundaries of the atom by some tie which is certainly not material. So far this is a gigantic conception, and, amongst other things, abolishes materialism as a serious scientific hypothesis, but that is not all. George Darwin goes on to contrast the world of electrons in the atom, the world of atoms in the molecule, and the world of planets and satellites in a solar system. If an atom were magnified to the size of our earth an electron might be larger than a marble and smaller than a cricket ball. Yet I think I am right in saying that if a molecule of some common salt were as large as a church, an atom would be the size of a full stop in print. The molecules themselves are so small as to be quite invisible. The most interesting part of this address to me is the manner in which all sorts of systems of stability and instability are compared. The cells which make up the bodies of vegetables and animals may be compared to a world of chemical substances. The body itself is a world of cells. And we may indeed go farther than this. The bees in a hive are not held together by any material chain, yet each, in obedience to Maeterlinck's "Spirit of the Hive," does not hesitate to sacrifice itself against an enemy, which would be to the bee's eye about as big as 350 feet in height is to ourselves. The cells in any plant are like the bees, all, without exception, working for the good of the plant as a whole. We cannot say the same of human societies, such as cities or nations, but though we are all intensely conscious of our freedom we are generally obliged by some cogent reason, as a rule want of money, to do something which the good of the community requires.

Now I should never have said this to you a year ago: it may be too fanciful and imaginative, but the tie which unites and governs the electrons in the atom or the bees in a hive is not a material one. Perhaps you will, however, excuse me on account of the imaginative stimulus of this great idea. The birth of this theory is interesting, it has risen from the investigation of radium, that extraordinary substance of which one ounce is said to possess sufficient energy to lift 10,000 tons a mile above the earth. Moreover, amongst the many British, French, and Italian scientists who have been working in a scientific *entente cordiale*, it is, I think, to Mr J. J. Thomson that the credit is mainly due.

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So that we are, in physical science, well in the forefront of discovery.

I wish I could honestly say as much for botany and the natural sciences. Almost all the interesting botanical discoveries of to-day have to be dredged and dug from the slime and tenacious clay of German botanical literature. The digger is generally so exhausted in the process that he cannot clean up and tidy his treasure so that the world may observe it. Even our own English botany is mostly inaccessible to the general reader, and there is a most distressing want of sympathy between the botanist and the practical man, such as the gardener, farmer, or forester. This is especially dangerous for the future of botanical science.

All this makes our work as members of this society very difficult. But I will try to show you some of the many things which we can discover in this district. There is first the way in which societies of plants gradually occupied Nithsdale. These plant societies or associations may be compared to the hive of bees or to the body of the plant itself, for each plant in one of them has its own special work to do for the good of the whole.

First, then, at the close of the Great Ice Age, some 200,000 years ago, the climate was of the most terrible kind. Intense cold, almost daily gales and hurricanes with snow, sleet, and rain, drenching fogs, and occasionally hot blazing sunshine. There was no "soil," in the gardener's sense of that term, nothing but subsoil of rock, boulder clay, gravel, or sand. Moreover, this was permanently frozen hard and only thawed on the surface. The first immigrants would be pioneers which would be scattered, fixing themselves at distant intervals, wherever they could find a root hold. It would be what botanists call an open flora, the ground being visible between the plants. These first Arctic immigrants would consist of such plants as Scurvy Grass, Plantago maritima, Suaeda, Oraches, Chenopodium album, Glaux, Caltha palustris, Armeria, Matricaria inodora, etc. All these still occur along the seashores as they did then. Besides these there would be (2) water plants, such as Phragmites, various Reeds, Grasses, and Sedges; and (3) Mountain Saxifrages, Polygonum viviparum, Ferns, such as Woodsia and Cystopteris, Sedum Rodiola, Silene acaulis, Oxyria, Draba, Cerastium alpinum, Pyrolas, all of which are mountain plants. These, ex-

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cept the water plants, would form a scattered open flora rooted in rock crevices or growing singly in sand and gravel.

The next stage of colonisation would begin by the development of lichens on bare rock surface or on gravel and clay. These would be mostly crust lichens, such as those here exhibited. Soon, however, mosses would form tufts on the rock or ground mixed with reindeer moss and other lichens. This process is of great importance, because such moss tufts produce true soil in which worms and other insects can be found. Then various Arctic plants would proceed to colonise these moss carpets. The most important of these Arctics are Blaeberry and other Vacciniums, Sheep's Fescue, Nardus, Deschampsia, Poa annua and alpina, Common Heather, Cotton Grass, certain Bushes and Deer's Hair, Cloudberry, Lycopodiums. These plants would at first be singly planted in the moss carpet, but if things were at all favourable they would very soon occupy the ground almost to the destruction of the moss, forming a continuous carpet or "Blaeberry-Grass-Heath" Association. I have not time to show how wonderfully these Blaeberries and Heather are adapted to do this. But with the appearance of this association true soil began to appear. The underlying rock or clay was penetrated and broken up by the roots, and the upper surface of the soil received regular supplies of leaf-mould.

Now, as the climate became more genial, this Blaeberry-Grass Association would gradually creep up the valleys and hillsides away from the sea until it reached the projecting points of Queensberry, Whitecombe, and the other storm-vexed and desolate summits of the Dumfriesshire mountains. It has not yet completely occupied them, for the original Mountain Saxifrages, Oxyria, etc., still occur in ravines and rocks which are not yet covered by moss.

I have found this Blaeberry-Grass-Heath on Mistylaw and Robber's Craigs in Renfrewshire, and something almost identical is the summit flora so well described by Smith, Lewis, and others in Eden, Wear, Tees, and Tyne, and Yorkshire. The plants are for the most part identical, and all seem to be Arctic.

If you ascend one of these hills you see no sign of man; nothing is visible but desolate whaup-haunted mosses and moorlands stretching for miles. Indeed the cultivated and inhabited valleys of Dumfriesshire are exceedingly narrow, and form a very

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small proportion of its area. This old Silurian tableland plastered with boulder clay in places is almost everywhere capped by peat 10-17 feet thick.

Now, the point which I wish to make is that these moorlands are a tableland and flat so that natural drainage is difficult. Thus on these flatter summits the Blaeberry-Grass-Heath would be subject to the attacks, especially of Cotton Grass, Deer's Hair, and Sphagnum moss, which would eventually kill out the Blaeberry and Grasses, and in many places the Heather, though this last might remain on dry rounded "humps." Thus peat might be produced and go on forming as it has done until to-day. But was there never anything else in Dumfriesshire? Remains of Scotch fir exist in the Highlands up to 1800 feet, where the great Silva Caledonica of Pinus Silvertris existed in Roman times. Lewis found Scotch fir remains on Crossfell in Yorkshire at 2500 feet, which are probably the great trunks recorded by Winch in 1825. Birch does occur in the mosses, but I have no record of remains of Pine even at 1400 feet. But I think that these remains will be found. At Kirkconnel this summer I was shown hundreds of little Scotch fir seedlings thriving on a dry peat moss of the most typical character, and some had become quite respectable trees. When the Blaeberry-Grass-Heather Association was attacked pretty soon by the Pine forest with its attendant Rowans, Birches, Bracken, Bluebells, and others, the result would be to form an enormously greater amount of good fertile soil. The next crowd of immigrants, the Oak, Beech, and their attendants, ferns and flowering plants, would then invade and dispossess the Pine forest, so covering lowland Scotland with the historic Oak forest.

I do not wish to say that the process here sketched was invariably the same. On steep slopes one may see, even now, that the Blaeberry-Grass-Heather Association has been altered to permanent pasture by the Nardus, Airas, and Fescues suppressing the other members.

So also in Lochar Moss, and in most of the fertile alluvial holms, the Arctic water plants, such as the Reeds and Grass Seeds, probably began to act very soon after the glaciers retreated, as they may be seen at work to-day. With the aid of Willows, Alders, and marsh plants, they are retaining the silt and floating stuff, changing shingle, mud, and sand into valuable pasture and arable.

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For the recent history of the vegetation we are scandalously ignorant. Neolithic people were contemporaneous with the Pine forest of the Danish peat mosses and people with bronze weapons in the Oak forest period in the same mosses. What happened in Scotland? Were these Pine forests, if they existed, destroyed by being cut down by stone and bronze axes? Were they burnt off, or were they grazed by goats, sheep, and Galloway cattle?

The importance of this question to us in Dumfries can scarcely be overrated. At present on these moorlands 1000 acres supports about one shepherd and half a gamekeeper. If they can be planted the same area would support 10 foresters and at least one whole gamekeeper. There are very many thousand acres of this country.

Now from what I have said you will see how much remains to be done. We are behind other countries in the study of plant associations. We ought to study them, examine and catalogue the plants, and we ought also to take photographs of them.

I know that Mr Barbour, Mr Lennox, and others have already done an enormous amount of work in this direction, but to get a complete picture of the distribution of the remains of each successive period is necessary for us to understand the life of early man in Dumfriesshire and his influence in Dumfries.

We also propose this session to inaugurate a photographic section in accordance with a suggestion made to us some time ago by Mr Johnson-Ferguson. We shall hope to have photographs exhibited at every meeting, and I would call upon all members present who possess cameras to remember this. If the suggested club in Dumfries is started we shall hope to work in sympathy with it. I think in this next session we ought to have plenty of interest.

14th October, 1905.

OPEN MEETING.

Chairman—The PRESIDENT.

NEW MEMBERS.—Mrs George Thomson, George Street; Mrs A. C. Penman, Airlie; Mr and Mrs J. P. Milligan, Aldouran; and Mr Alex. Turner, Chemist.

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FORESTRY. By Sir HERBERT MAXWELL, Bart., M.P.

I come before you to-night rather in the spirit of a converted criminal than in the hope of telling you anything you don't know already. I hope that my presence here may be taken as evidence of the awakening conscience of landowners to the opportunities we have missed, to the valuable source of income which we have squandered, and to the urgency for a reform in our system of forestry. I was brought up with an intense and sedulous love of trees. Some of my earliest recollections are connected with the instruction given me by my father in what were, at that time, the approved principles of wood management, and I continued to act on those principles after I succeeded to the estate 27 years ago. The result has been that, although I possess a considerable extent of ground under trees, there is hardly any of it more than 15 years old which I should not be ashamed to show to one who understood the three principles of forestry as distinct from arboriculture.

I have said thus much as preliminary, in order that too much may not be expected from me in the way of instruction. When Lord Mahon asked the Duke of Wellington whether his experience in his first campaign—that disastrous one in the Netherlands under the Duke of York—had been of any service to him, he replied—"Why, I learnt what I ought NOT to do, and that is always something." Wellington, happily for his country, learnt his lesson while the best part of his life still lay before him. I have learnt mine at a period when Horace's lines have a peculiarly mournful significance:

> With all the trees that thou hast tended
> Thy brief concern is almost ended,
> Except the cypress—THAT may wave
> Its tribute o'er thy narrow grave.

WHAT THE STATE MIGHT DO.

Well, now, I have tackled a subject rather unwieldy to be dealt with in an hour's discourse, and I will try and confine myself to a few of the most salient points. I will divide it into two branches—first, what I conceive the State might do with prudence and profit to develop the national resources; second, what private owners might do to develop the resources of their estates.

Since I entered Parliament 25 years ago two enquiries have

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been directed into this subject—the first a Select Committee of the House of Commons which sat 1885-6-7, the second a Departmental Committee which reported in 1902. No action was taken on the report of the first; of the result of the second we have more hopes, because we have now, what we had not in 1885-7, a Government Department—the Board of Agriculture and Fisheries—to which has been committed the duty of promoting instruction in forestry. Among the many points upon which both these committees were in thorough agreement were these facts:—1st, that "the world is rapidly approaching a shortage, if not an actual dearth, in its supply of coniferous timber, which constitutes between 80 and 90 per cent. of the total British timber imports; 2nd, that there is a vast area, estimated in millions of acres, capable of growing timber of the finest quality; 3rd, that the climate of the British Isles is favourable to economic forestry conducted on a proper scale (not in grudging patches, clumps, and strips); and 4th, that it requires only the exercise of timely forethought and a moderate annual expenditure to anticipate the time when scarcity of foreign timber shall have greatly enhanced the price, and to replace with British-grown timber much of those enormous imports upon which we depend at present.

A SCHEME OF STATE FORESTRY.

These four points having been emphatically affirmed by the two committees, I need say nothing more upon them to-night; but there is a fifth point on which I venture to go a little further than the Departmental Committee. "We do not feel justified," says the report, "in urging the Government to embark forthwith upon any general scheme of State forests under present circumstances." Well, I have the temerity which the committee lacked to urge strongly the wisdom of embarking upon a scheme of State forestry, and if I am blamed for that temerity, I make the same excuse for my scheme as served a certain young person who had added an unforeseen unit to the population—"Please, sire, it's only a very little one!" I only ask for the investment—the investment, mind, not the gift—of £10,000 a year for the purchase and planting of suitable land.

No branch of agriculture, not even wheat growing, has suffered such a slump in the last twenty-five years as hill sheep farming. There are hundred of thousands of acres in Scotland,

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once valuable sheep pasture, now rented at from sixpence to not more than two shillings an acre. From some of it a good additional return—say, a shilling an acre—is obtained for the grouse on it, but a great deal of it is unsuitable for grouse, but very suitable for growing timber. Such land is constantly being offered for sale. Twenty-five years' purchase would secure 1000 such acres for £2500. If the ground is level, planting three feet by three will take 4,840,000 trees; the cost at £6 an acre--£6000 for the 1000 acre. On sloping or steep ground fewer trees will be required, and the cost proportionately less. I make no provision for houses or fences, assuming that the farm is bought all standing, but £500 must be allowed for repairs and preliminary draining, making a total initial outlay of £9000 on the 1000 acres. The interest on the balance of £1000 ought to pay the annual tool bill.

WILL IT PAY?

Now, the great question is—Will this investment pay? Well, I am bound to say that it is not one that I could advise any private individual to make and expect good interest upon his capital; the lock-up would be more than the circumstances of most landowners would permit. I shall return to that point presently. But I do consider it an investment which the State, which pays no death duties, not only might make with prudence, but is bound to make as a matter of public policy.

It is a difficult thing to find any woodland in Great Britain, either Crown property or in private hands, which have been systematically managed on a working plan over a sufficiently long period to estimate the results commercially. Nevertheless, I have had the advantage of examining the balance sheets for five years of 3700 acres of wood on the estate of Novar, in Ross-shire. Extensive planting was done there from the beginning of last century continuously, except during thirty-two years from 1850 to 1881. This was an unfortunate break, for it vitiated the regular rotation of the working plan; nevertheless the results are not unsatisfactory. The average nett profit upon these woodlands for the five years 1892-6 was slightly over 11s an acre.

Next I took the official returns of the German State forests covering five years, and found that the average nett return was

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exactly the same as from the Novar woodlands—11s an acre. Here, then, we have this result, that land which, for agricultural purposes, is not worth at the highest estimate more than 2s an acre annually, has been made to return an annual nett profit of 11s an acre. I say, then, that money so invested cannot be regarded as unprofitable. Moreover, these results were obtained upon the prices of timber current at the close of last century, whereas all indications point to a considerable rise in that price. The German official returns show that during the last forty years the nett profit per acre has been steadily increasing, owing to rise of prices and the establishment of pulping mills and chemical works.

BRINGING THE PEOPLE BACK TO THE LAND.

All I ask, then, is that the State should invest £10,000 a year in the purchase and planting of land. At the end of fifty years it would have made a progressive investment of half a million sterling—the cost of four days' campaign against the Boers. The property which it had acquired on the rent basis of 2s an acre would be yielding 11s an acre, a rise in value of 550 per cent., and this assuming, against all appearances, that the price of timber will continue stationary for half a century. But that is not all the advantage to be gained. The minds of politicians and sociologists are grievously exercised just now, and justly so, about the physical deterioration of our population owing to the concentration of the working classes in our large towns. No greater boon can be devised than healthy and remunerative work in the open-air of the country. Suppose my fifty thousand acres to have been planted by the State. Instead of a rural population of one shepherd to 1000 acres of pasture —50 shepherds on the whole extent—you will have established one woodman to every 100 acres, or 500 woodmen on the whole ground. Then there are the forest industries which will spring up; each requiring a number of hands. In the whole United Kingdom there is not a single pulping mill; we import £3,000,000 worth of wood pulp and wood paper annually. The first pulping mill was established in Saxony in the year 1854, fifty years ago. There are now 600 pulping mills at work in the German Empire alone.

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ALLEGED DISADVANTAGES.

There appeared lately in one of the evening papers a letter from a noble earl in reference to Mr Keir Hardie's proposal for State forestry. His lordship declared that it was futile to think of profitable forestry in the United Kingdom, for two reasons—first, because of the furious storms which sweep these islands at irregular intervals; second, because the timber produced in our woods is far inferior in quality to that grown on the continent. As to the first objection, I deny emphatically that we are more exposed to storm than, say, Norway or Sweden, whence we draw such large supplies of coniferous timber. It is true that we suffer far more from wind damage than is the case in continental forests, but that is the result partly of our custom of planting in narrow belts and isolated small masses, and partly of the mischievous system of over-thinning which came into vogue in the nineteenth century. Trees that have been encouraged to grow heads out of all due proportion to their height will succumb to a storm that may be lifted harmlessly over a solid block of well-grown forest. A thousand contiguous acres of woodland will suffer far less from gales than 1000 acres scattered over an estate of 10,000 acres.

Next as to the alleged inferiority of British timber to continental. Surely that is a strange allegation against a country that used to supply timber for the noblest fleets that ever put to sea. I may say in passing that it was the demand for ship timber which initiated our vicious system of over-thinning. Shipwrights did not want straight boles; they wanted bent timber, and you will actually find in old treatises on forestry instructions about tying the limbs of oaks to produce the desired contortion. The result has been that we have conceived and aim at a false ideal. Our notion of what an oak ought to be is framed upon such a magnificent deformity as the "Major" oak in Sherwood Forest. That we can grow fine straight oak if we choose may be seen in this example from the New Forest—a domain which, unhappily, the State is not permitted to treat on right principles. Here, again, is a wood of self-sown oak at Thornbury, in Gloucestershire, 30 to 40 years old, which promises to develop into splendid clean timber. But to obtain examples of the highest development of oak timber we must go to France. Here are a series of photo-

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graphs showing a forest of sessile-flowered oaks in France through all its stages.

A QUESTION OF FOREST MANAGEMENT.

Now that we want straight, clean timber, there is no country in the world better able to produce it than our own. "Ah, but," says the timber merchant, "your firs are grown too fast. British deal cannot compare with Scandinavian, which is grown much slower." True, but here again the evil comes from over-thinning. Grow your trees in close forest, and no matter what height they attain, or how soon they attain it, the annual rings will be close together, and the timber will be slow grown. It is a mere question of forest management. Trees in open order will produce branches and coarse timber, with wide annual rings; trees grown in close forest will yield clean planks, with close annual rings. Here are some examples from a wood of Mr Elwes' at Colesborne, in Gloucestershire. Most of these trees measure 125 feet in height, and compare favourably in cleanness of bole with the following examples from Savoy. Silver fir with a few spruce, and silver fir with a larch or two.

It is idle to say that timber cannot be grown at a handsome profit in Great Britain, but it is equally idle to attempt to grow it at a profit unless sound principles of commercial forestry are adopted.

WHAT PRIVATE OWNERS MIGHT DO.

I now come to the other branch of my subject—the condition of woodland or private estates in this country. In dealing with that, I must be understood to generalise. I could name certain properties on which the principles of sound forestry are in full practice, and of which the proceeds of the woods contribute a considerable part of the revenue. But taking one estate with another, I shall not be accused of exaggeration if I describe the woods as run upon amateur lines, more or less modified by local custom. It is not the custom to expect a land agent to have had any training in economic forestry; still less likely is it that the owner himself shall have had such training. It would be natural, then, that neither the agent nor his employer should attempt to interfere with the management of the woods. But what landowner is there so poor in spirit that he does not aspire to direct in person the operations in his woods. He has a forester or

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woodman, no doubt, with an efficient staff under him, but that forester is very seldom remunerated on a scale calculated to secure sound technical knowledge. On some estates he combines the duties of forester with that of head gardener; on others he receives a salary equal to that of a head gamekeeper. He is at best but a foreman woodman, and even if he pursues sound routine operations, these are constantly liable to be interrupted or diverted at the caprice of his employer. It would be strange, indeed, if the result of such a want of system proved anything but disastrous. Imagine any man investing liberal capital in a large farm without any technical knowledge of farming or the rotation of crops, and yet dictating to his farm bailiff how and where those crops were to be grown. The result would be apparent in a very few seasons, and, so far as that farm was concerned, the balance sheet would spell bankruptcy. Even in that case, the amateur farmer would have the example of sound agriculture as practised by his neighbours, and he would have the sense to pick up some knowledge as he went along. But where is the amateur forester to turn for guidance in this country? Perhaps there is not within his country a single example of close canopy and clean timber. To go to the State forests of England is to learn the shortest road to ruin; for what is the latest balance sheet of H.M. Office of Woods and Forests:—

Royal Forests and Woodlands—1903-4.

Receipts	£32,481 18 8
Expenditure	58,402 16 1
Balance loss	£25,920 17 5

There is one aspect in which a vicious system of forestry is far more disastrous than bad farming. The farmer may see where he has gone wrong after the experience of two or three seasons, whereas mistakes in forestry do not become fully apparent until the third and fourth generation.

THE RESULT OF THINNING.

I stood not long ago beside the owner of one of the noblest parks in England. He had brought me to see an oak wood, originally pure forest, about 50 acres in extent, which was causing him much concern. They were splendid trees, about 180 or 200

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years old, averaging 100 feet in height, with 40, 50, 60 feet of glorious clean boles. I don't know the like of this wood, as it must have been, if it be not the forest of Cour Chevernay, on the Loire (opposite Blois). Twenty years ago, there cannot have been less than 9000 or 10,000 cubic feet per acre, which, taken at only 1s a foot, represents a value on the 50 acres of some £25,000, or £500 an acre. Who could have blamed the owner had he treated this woodland as a crop? Well, all his neighbours would have blamed him bitterly, so deeply rooted has become our habit of looking upon woodland merely as an extra—a luxury —a playground. And yet I maintain that it was folly not to turn this timber to account. For look you what has happened. My friend had all the amateur love of trees which is characteristic of English country gentlemen. About twenty years ago, thinking to improve the landscape, he had glades cut in this noble grove, and thinned out the whole of it severely. His grandfather, if he knew his business, may have warned him what must happen if pure oak high wood is suddenly converted into trees in open order. If he did so, his advice was disregarded: the owner knew what he wanted, but the result has been far different. Nearly every tree has become stag-headed, and thrown out an eruption of growth all along the stems and branches. The grove has been ruined.

My friend did me the honour to ask my opinion. If I had given it, he would have called me a beggarly Scot, so I held my peace—even from good. But I had no doubt what a good forester's advice would be. Fell all the remaining trees and re-plant. As near as I could judge, there seemed to be an average of thirty oaks left on every acre. These cannot be worth less than £7 10s a-piece standing, or an aggregate of £11,300 on the fifty acres. I have purposely put this calculation very low, for I was shown where one of these oaks had been felled recently, and the timber sold for £20. But I know what will happen. My friend loves his trees; he will never harden his heart to part with them; they will go from bad to worse, and the greater part of this money will be sacrificed. The future of these noble trees will be like that of the mournful ruins of Cadzow Forest, Lanarkshire.

LANDOWNERS' OBJECTS.

Now, one must take things as one finds them, even if one may entertain a hope that better understanding may prevail some

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day. The British landowner has a perfect right to manage his woods in the way best calculated to secure the objects he has in view. These objects, I think, are generally as follows:—1st, landscape effect, especially park scenery; 2nd, game cover; 3rd, shelter; 4th, timber for estate purposes. To insist upon the uniform application of strict continental system to all classes of land in this country is very far from what I advocate. In the first place, I don't think close canopy is as essential on a great part of our area as it is on dry soils and climate. The climate and soil of our islands, part of them, at least, is far more propitious to tree growth than those of a great deal of the forest area of Europe. But what I do advocate is the application of strict system, modified to suit our peculiar circumstances.

Now let us take these four objects which I have mentioned as uppermost in the average landowner's purpose, and see how far they are to be reconciled with a sound system of forestry.

LANDSCAPE EFFECT.

1. Landscape effect, especially park scenery—He must be callous indeed, be he landowner or simple wayfarer, who is indifferent to the charm of English park scenery, which consists of prairie with groves and scattered trees. But it is an effect which can only be obtained as the result of age. The finest park scenery is a gradual evolution from close forest, and never can be attained by planting single trees apart upon a plain. By that means you attain nothing but huge cabbages with an ugly horizontal browzing line, or picturesque monstrosities such as the great beech at Kilkerran, Ayrshire, which girths 19 ft. 6 in. at 5 ft. high, or malformed specimens like this ash. Now compare with such results some park effects that have been evolved out of high forest. Trees are social creatures; for the development of their true character they require the discipline of close company to rear stately stems and preserve symmetrical heads. I must not linger over long upon this fascinating subject, but if anyone doubts my contention that good forestry is not only reconcileable with the finest park scenery but is actually essential to its production, let him visit Ashridge Park, in Hertfordshire, and reflect upon the process which reared the famous beeches there. It is out of a well-grown woodland only that you can carve a beautiful park. For the last sixty or seventy years most of us have been

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doing our best to render growing woods incapable of producing fine park scenery. We have been taught to thin mercilessly—to allow no tree to interfere with another, thereby preventing the development of clean stems, and encouraging instead a wild profusion of branches, as if the object had been to produce an orchard. Well, but it is argued, a regular forest, grown on continental principles, is painfully monotonous. You will lose all the variety and life of an English park if you insist upon close canopy. My answer is that of all rural industries forestry, in its ordinary operations, is productive of the most picturesque scenes.

THE AFFLUENCE OF LANDOWNERS.

There is another and more pressing aspect of park management. British landowners are far less affluent than they were thirty, fifty, one hundred years ago; it is a question with many of them whether they can maintain their parks at all. Is it not sheer blindness to refuse to develop what may be rendered not only a source of regular income, but a reserve to be drawn upon in times of special pressure, such as the payment of death duties? Why, so far from destroying English park scenery, the application of science and system to wood management may be the very means of saving many a park from the hammer or the speculative builder.

Before it can be hoped that landowners will take that course, they must apply themselves vigorously to acquire the principles of the craft, unlearn a great deal that they have been taught, and harden their hearts to deal with their woods in general as a crop.

GAME COVER.

2nd. Game Cover—This is perhaps the point at which British landowners and foresters are most directly at issue, and I admit that it is not easy to reconcile the idea of an English game cover with economic forestry, seeing that underwood has ceased to have any commercial value. At the same time, it is a fact that our present system of battue came from Germany, where forests are managed on the strictest principles of commerce. Close high wood is disliked by game, chiefly because of the scarcity of food there; but cover shooting is such an artificial affair now that pheasants may be made to haunt whatever ground is best adapted for their artistic destruction. It is merely a question of where

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their food is provided. As for cover, there is no cover better than young wood up to 15 or 20 years, and in a woodland managed on economic principles there will always be a due proportion of young wood, into which birds may be driven for the rise.

But there is one form of game absolutely incompatible not only with profitable but with decent forestry. Will any landowner honestly and boldly calculate what ground game—especially rabbits—cost him per acre of plantation? Every yard of ground that is planted must be wire netted, and this cannot be done at less than 6d a yard. Where the woodland is worked in proper annual rotation, ten acres, say, felled every year, and ten acres replanted, the cost of wire netting is at a minimum, for a square of ten acres may be fenced for between £20 and £30—say an additional cost of 50s an acre. A pretty heavy inroad upon capital expenditure; but you must multiply this indefinitely if you wish to deal with blocks of less than 10 acres—if you wish, for intsance, to plant up blanks in woodland from half an acre to two or three acres in extent. And even this is not all. Where the detestable rabbit abounds, ground cleared of timber cannot be restored by natural regeneration. In such a case there must be placed to the debit of the rabbit account, not only 50s an acre (the cost of wire-netting), but £6 an acre (the cost of replanting), which would be unnecessary on ground suitable for natural regeneration. In other words, the presence of rabbits means an initial tax upon young forest of £8 10s an acre—which may be equal to half the fee of the land. If British forestry is ever to regain the place to which our soil, climate, and requirements entitle it, it must be relieved from the intolerable scourge of rabbits. The place for the rabbit—and the only place—is the warren. In those scenes I showed on the screen from Ashridge Park you may have noticed how bare was the ground, not only under, but around the beech trees. To show what that ground is capable of doing in the way of natural regeneration, look at this part of it, which has been protected from rabbits and deer for the last 15 or 20 years.

SHELTER.

3rd. Shelter—Shelter from sea blasts or from the prevailing wind is a most legitimate object in forming a plantation. I have only a few words to say about it. Do not grudge a few acres in laying out belts. Even a narrow strip affords warmth and shelter

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so long as it is young, but there are few things more cheerless than the same strip when the trees are approaching maturity, and the wind blows draughtily through it. The most successful sea shelter which I have seen is on Lord Leicester's estate of Holkham, where miles of sand dunes have been planted with four different species of conifer, Scotch pine, pinaster, Austrian, and Corsican, and the Corsican has beaten all the others in a very remarkable manner. It even reproduces itself, although there is much ground game about.

TIMBER FOR ESTATE PURPOSES.

4th. Timber for Estate Purposes—A most important object this, and one that is usually accomplished—but at what a cost! I do not hesitate to say that, on many estates, if the rent of the ground, annual rates, cost of planting, and wage bill be reckoned, much money would be saved if not a foot of home wood were used and foreign supplies bought from the timber merchant. And yet you say that timber ought to be grown for the market at a profit! Certainly it ought; but not on the present system—not unless timber is treated as a crop, with a regular fall, and grown of good quality. It is the cut-and-come-again method that is ruinous both in cost and in quality. The annual fall ought to supply both estate purposes and the timber market. Yet I have heard within the last few months landowners complaining that they cannot get an offer even for fine timber. No; because they have not secured a proper business connection. To do that, two things are necessary, as any greengrocer will tell you—regularity of supply and uniformity of quality. It is estimated that there are 3,000,000 acres of woodland of sorts in Great Britain and Ireland. In Belgium there are only 1,750,000 acres, yielding a return of £4,000,000 a year. At that rate British woodlands ought to yield £7,000,000 a year. At what figure would the most liberal estimate fix the return? Yet British timber, properly grown, would be no whit inferior to Belgian.

The fact is, there is no regular trade in home timber. Merchants cannot rely upon a steady home supply, so they have recourse to countries where they can be sure of getting exactly the quantity and quality they require. Mr Nisbet has put the case concisely:—"Available markets cannot be utilised to the best advantage if the quantity of wood offered one year is large, the

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next small, a third year wanting altogether, and so on irregularly. 'First a hunger, then a burst' is bad in this as in all other cases.'' Add to this that woodland subject to inordinate thinning—to arboriculture instead of forestry—produce timber of such inferior quality as to lead architects to stipulate for foreign timber in all their work.

Now I think I have said enough to explain the general character of what is on my mind in this matter. To go closer into details would outrun reasonable limits of time. I am convinced that by adopting sounder principles and continuity of treatment, both the State and private owners of land might indefinitely enrich future generations, and indemnify themselves meanwhile, wholly or in part, for the outlay and lock-up of capital, but clearing the ground of a great deal of ill-grown wood which occupies it just now.

One circumstance is highly favourable to reform. There is plenty of sound instruction in silviculture to be had. Five and twenty years ago British landowners could only turn to such vicious and misleading instructors as Brown and Michie. Now there is abundance of good literature, and such writers as Schlich, Nisbet, and Forbes are at hand to pilot inquirers into the true course.

3rd November, 1905.

Chairman—The PRESIDENT.

NEW MEMBERS.—Mr R. Chrystie, Irving Street, Dumfries; Mr Dewar, manufacturer, Maxwelltown; and Mr Andrew M'Cormick, solicitor, Newton-Stewart.

NATURAL HISTORY NOTES. By ROBERT SERVICE, M.B.O.U.

In the course of a very interesting contribution, Mr Service drew the attention of members to the first occurrence in this area of a species of fish not hitherto found on our shores. On 11th July last, he said, he received a telegram in the course of the morning from his friend, Mr M'Queen, the lessee of the fishings at Port Ling, to say that late on the previous evening at the ebb of the tide he had found a very big fish, which no one could

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recognise. He got down in the evening, when he found the fish lying at the foot of the cliffs. It was a large specimen, 5 feet long and 32 inches in girth behind the first dorsal. It displayed brilliantly iridescent colours, silvery white beneath and ultramarine blue as to the fore part of the shoulders. Behind the dorsal fins there was a reddish colouration, and the whole aspect of the monster was foreign to our fishes. He found it to be the Maigre, a well-known Mediterranean fish that is also found in Atlantic waters on the North African and Portuguese coasts. Only some two instances of the occurrence of the Maigre on the coasts of Scotland had been hitherto recorded, and this was the first in our own area, and indeed over the whole of the western coast, till Cape Wrath is rounded. He could not preserve at the time such a large fish, but he took a few of the scales, and these were quite sufficient to enable an expert to identify the monster by. Another item to which he invited the notice of the society was one of the rarest birds which he had come upon in this area—a specimen of the Ruff, shot on Tuesday, by Mr Quinn, the head keeper at Lord Herries's Caerlaverock estate, near the shore. He had never previously seen this bird in the area, but he understood that some three or four had been got at various times, though a considerable period since. In the summer the bird has a rich plumaged ruff or tippet, no two, however, being alike. Some were barred with brown, some were almost black, and some were white. Shortly after the breeding season was over the dress of the summer disappeared, and the bird became a rather inelegant creature. Mr Service next exhibited two larvæ of the Death's Head Moth, which had been found a week or two ago on the farm of Townhead in Closeburn when potatoes were being dug. At one time the Death's Head Moth was an excessively rare insect, and he had no doubt whatever that at the present moment it was becoming a comparatively common species. Year after year they were being noted, whereas formerly five or six years passed without one being heard of. He remembered the late Mr Lennon, who was a most enthusiastic entomologist, saying to him that it was quite an event in his life-time to find one of these moths. In 1897 the president (Professor Scott-Elliot) brought him a larva, which turned out to be the first specimen that was ever got in Scotland. A second turned up that same season from Kirkmahoe, but Professor Elliot's was the first. In 1899 no

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fewer than 26 larvæ were found in different parts along the Galloway coast. None were found in Dumfriesshire, but an odd straggler or so were got about Kirkgunzeon and Corsock. Most of them, however, were got about Colvend and Kirkbean. He thought it likely that the larvæ might have originated from eggs on the Ti tree—a tree which grows very luxuriously at Colvend, and is known to be a favourite food of the larvæ. Not a single one had reached the imago stage. The eggs and larvæ were not in a natural environment here at all, and the tendency was for these colonists to die out. Two years later—in 1901—some larvæ were got, but from that time till now none had been seen. One moth was recorded from Thornhill last June, and it was just likely that there might have been a small party of immigrants, one of which had deposited eggs there. In 1898, one afternoon in going home, when it was still bright daylight, he had the good fortune to see one of these immense insects crawling up the wall of one of the houses in Laurieknowe. He climbed after it up a drop pipe, getting on to one of the windows at the risk of being taken for a burglar, and secured it. A show had passed by shortly before, and a boy's comment on his proceeding was that he was "after yin o' the wild beasts" that had escaped. He next exhibited an insect belonging to the same division as the Death's Head Moth, namely, the Convolvulus Hawk Moth. This insect never seemed to become quite established, although in recent years it had been much more in evidence than it used to be when he first became acquainted with it. These Hawk Moths, as they were called, had very strong powers of flight, and there was no reason whatever why they should not emulate the birds in their powers of getting across the country by the overhead route, because they could fly as well as any bird, and no doubt in the higher reaches they could get along as easily. A number of years ago he got one of these moths from Sir George Walker of Crawfordton, who took it from the sails of a yacht on which he was travelling between Malta and Sicily. Another one he had was got off the west coast of Ireland in an almost similar way, having been taken from the sails of a fishing boat. Another was taken from the sails of a boat sailing between the Isle of Man and Whitehaven. These facts showed that the Hawk Moth was accustomed to taking long flights at sea. He added that our area had the honour of producing the only known instance in Scotland

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of the larvæ of the Sphinx Convolvuli, which were found in Corsock.

The President said that the occurrence of the Maigre on the Solway was especially interesting. Apparently it must have been swept out of its native waters into the West Atlantic, and then brought up the west coast, finally landing on our shores. The fact was particularly interesting from the point of view of botanical distribution, because he had never been able to find out how it was that a special group of Portuguese plants—and the Maigre was to be found chiefly in the Mediterranean and off the North African and Portuguese coasts—colonised Cornwall and the western coast of Ireland, and were to be found nowhere else. In regard to the Death's Head Moth, he should like to know whether it was likely that it might become established here or not. He remembered seeing off the Madagascar coast enormous clouds of butterflies which had been swept off the land by a breeze, and they could see the wretched things with their white wings twinkling in the sun drifting away across the sea, where, of course, they would be drowned. Was there any hope of our ever having these moths prevalent here?

Mr Service, in replying, said the President had raised an interesting point, and that was as to the occurrence of some of those southern forms in our latitudes. It was pretty well known that a number of fish that really belonged to the Mediterranean fauna came up towards British shores each summer. There was a very well marked migration of the Mediterranean forms each July, continuing as far on as to the middle of September. He referred more especially to such fish as the Bonito, Germon Bonito, Pelamid, Swordfish, and now the Maigre. What caused these migration movements they could hardly ascertain. They did not come north to breed as many other fish did. It might be that they were after food, as the mackerel and some of their congeners came in advance in larger shoals. As to whether the Death's Head and other moths were ever likely to form permanent settlers here he was not sure from the information at present in their possession. Perhaps five years ago we saw the initiation of one of those warm periods—periods which were hardly recognisable in the midst of those curious masses of figures we got from meteorologists, but which were well enough defined. Well, the prevailing feature of such weather was that from the

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end of April till perhaps the middle of June we have a long occurrence of pretty strong southerly and south-easterly winds. These were known to bring migratory birds to Great Britain in augmented numbers, and it would appear also that they brought these strong winged species of lepidoptera. That migratory process had again become very pronounced of late years. The last warm period occurring in the early spring months came to an end somewhere about 1865, but for thirty or thirty-three years before that it had continued. Since then there had been a marked absence of these seasons till within a few years ago, when these moths had become very noticeable.

HODDOM BRIDGE. By the late GEORGE IRVING.

The following correspondence, which relates to the building of a bridge over the River Annan at Hoddom, followed upon an agitation for its erection as a substitute for the old ferry boat, led by the Duke of Queensberry on the west and Sir James Johnstone of Westerhall, Sir William Maxwell, and other county gentlemen on the east. Nothing could be done so long as Mr George Sharp was laird of Hoddom, but pressure was again brought to bear upon his brother Matthew on his succession to the estate.

"Dear Sir,—Upon Tuesday's night the water waxed unexpectedly, and as I suppose the Boat had opened by the strength of the water betwixt the Keel and the Boards, and being very crasey, the reason for me thinking so is; That I found the pouls and other Pieces of Timber that were louse within her floating in the Boat Pool, on Wednesday, which undoubtedly had gone out when she had sunk; I went next morning down to the foot of the River; and to the Seafield, and Battlehill, and along the coasts of Newby, in search of Her, but could Find nothing. On Thursday morning I found her mostly all gone in Pieces in Scale's Pool, opposite to Turnshawhead, and thought to have got her out but could not make it with all the hands I could get. Next day I went to her again in order to see if I could get her out; and took the Trows along with me, and went into the Pool and fixed Ropes to the chain in order to draw her out, and the Stern, and some of the Beams came from her along with the chain, and Ropes, and the water being Pretty Big we lost sight of the

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Remains of Her, and could never see more of her, nor can I make any more search for her till the water turns little, and clear, and then I shall make all the search possably I can for the Remains of Her; She had carried the stone that she was fixed to alongst with Her and when I found Her there was not one Link of the Chain Broke.—I am,

"Dr. Sir, Your most obedt. and most humble servant,

"PATT. NORRIS.

"Halyards, ye 16 Novr., 1761."

Addressed to Matthew Sharp of Hoddom, Esqr., at his lodgings in Dumfries.

Extracts from Letter from Hoddom to Lord Garlies, 1st March, 1762.

Annan Bridge Tolls.

"My Lord,—I am told that all Black-Cattle pay two shillings per Score. Sheep I don't remember what. A chaise a shilling. A cart with two horses 1 sh. A cart with one horse 6d, and every person on horseback ½d. I know that the Cattle which come in droves from the North Country by Moffat, and so come not within 4 miles of Annan Bridge or town of Annan in their way to England have been stoped at Ecclefechan and at Burnswark by the Tacksman of the Toll till they paid the toll as alleged due to Annan Bridge. I do believe the Annan people never had any regular tables made up of these tolls, for I cannot recollect upon reading their act of Council sometime agoe there was any such. It is but of late years that they had either chaise or cart in that part of the country; and now all our chaises from Dumfries pay a shilling, and the Carlisle one horse carts with merchant goods sixpence each. I have been told that this bridge toll is yearly sett by Roupe sometimes at £100, and sometimes at £120; but the magistrates and Town Council who are possessed of the records can only answer this. I am told they have remitted £200 to their agent as part of the public revenue for the Town at the expence of the Country. . . . It appears there was a fund left for Building this Bridge and no doubt Annan has a copy of Doctor Johnstone's will as well as Dumfries. . . I would have sent you a copy of the will, but as Mr Johnstone of Carnsalloch can direct you where to have an authentick extract from the Register of the Prorogative Court of Canterbury,

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I thought it was needless. The Exrs. nominate in the will and codicil did administrate 18th October and 4 Novr., 1639, and Lord Johnstone with Sir David Cunningham of Robertland were overseers to the Exrs. in seeing the Will duly executed. In the Codicil there is £3000 left to Lord Johnstone to be applied to pious uses in Scotland which I imagine went the same way with the £500. . . . We have reason to complain that the town of Annan did not get the family of Annandale to apply the money left, but rather took, as they alledge, that very sum by way of loan from that family, for that purpose, and we therefor obliged to pay a toll at Annan Bridge, while all the other Bridges in the County are free to them and every body. . . . The North Country have reason to complain of paying this toll for the Cattle that come by Moffat on their way to England which are never within 4 miles of either the town or Bridge of Annan.

I am with the utmost regard,
My Lord,
Your Lordship's most obedt. and most humble servant,
"MATTW. SHARPE.

"Dumfries, March 1, 1762."

Hoddom Bridge.

In a letter without date, but evidently 1762, Matthew Sharp of Hoddom writes about the proposal to build a bridge over the Annan at Hoddom, now known as Hoddom Bridge:—

"Dear Sir,—I had a letter from Sir Robt. Laurie at Edinr. by last post wherein he writes me that Lord Garlies wants an explanation of the enclosed note for himself and the other members which he desires me to send him. I have wrote him all I know about it which I desired him to communicate and could have been more particular had I been in ye country to have had the information of my tennants. But I shall freely write you my reasons for opposing the toll at the Bridge of Annan which are in some measure particular as to my self.

Sir James Johnstone and the late Sir Willm. Maxwell and the gentlemen from Esdale, had long insisted for a Bridge over Annan (Water) near to Hoddom (Castle), which my Brother would not consent to as he must have sunk five pound as the Rent of his boat and made the road much more publick by his house

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and through the most of his whole lands which are arable ground. But this Sir Will Maxwell and other Gentlemen in that part of ye Country and Esdale insisted with me what advantage it would be to the Country in generall and them in particular to have a Bridge as the Boat did not answer frequently. To which I consented, knowing that the then toll at Annanbridge will soon expire. If the toll is continued at Annan Bridge and the Bridge at Hoddom to be built free, I shall have the whole Galloway Droves to pass my Door and my planting destroyed and the tenants' ground abused. There is another inconveniency that has not been adverted to. There is a road thro' Locharmoss by which the Drovs will then come which was made at greater expense and in which I had a grat hand, and is of great advantage to the Country and myself, as it makes me four miles nearer the town of Dumfries in place of going the round by Tinwald and Lochar Bridge. If the Galloway Droves go that way for Two years it will make that road so bad that it will not be in the power of the Town of Dumfries to support the expense thereof to which they are bound. It is at present in a bad state and the Town grudges the repairs upon it already, and you may be sure the Drovers will take the roads that are attended with the least expense.

"I think it hard to raise a publick revenue to the Burgh of Annan at the expense of the Country to Drink and Squander away which is the use that is most generally made of it. But if the D. Q. (Duke of Queensberry) shall think it will tend to the public good of the Country you have my consent to it, however I may think my own private interest may suffer.—I am, Dr. Sir,

"Your most affect. humble sert.,

"MATTW. SHARP."

No address is upon the letter.

The bridge was built, and has been a great comfort and convenience to the public ever since.

RAISING DOUBLE POLYANTHUSES AND PRIMROSES FROM SEEDS.

By the SECRETARY.

As is well known to most, a number of double Primroses and Polyanthuses have been cultivated in gardens for many years. From time to time additions have been made to their

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number, but these have generally been the result of what may be termed chance seedlings appearing in gardens or among plants raised from the single forms and sown without any definite purpose beyond that of raising single-flowered varieties. Some interesting experiments which have come under my own observation may be considered worthy of consideration, and these may perhaps induce some of the members of our society to begin similar work upon the same or other lines. The experiments were made by Mr P. Murray Thomson, S.S.C., Edinburgh, the Secretary of the Royal Caledonian Horticultural Society. Mr Murray Thomson applied the pollen of a double Polyanthus called platypetala plena to a single white Primrose. From the seeds which resulted a number of seedlings were produced. When these flowered all were single and none were white. These were allowed to seed without any attempt to cross-fertilise them artificially, and the result has been a number of plants of various colours, some of them white, like the original seed bearing progenitor, and a considerable proportion of double flowers, almost entirely of the Polyanthus or bunch-flowered types. Out of a number of these seedlings sent to me for trial I had one good double flowered one of a light purple colour. Mr Murray Thomson has, however, some which are more double than my one, and of considerable variety of colouring. There are whites, pale yellows, pinks, roses, magentas, and purples.

One of the most remarkable things about this experiment has been the fact that the first cross gave no double flowers, and that it was not until the next generation that the double flowers appeared. This suggests several considerations in our treatment of the interesting study of the heredity of plant characters.

17th November, 1905.

Chairman—The PRESIDENT.

NEW MEMBERS.—Miss Thomson, Langlands Place, Dumfries; Mr W. R. Farish, Amisfield Tower; and Mr J. G. Drummond, Sandon, Dumfries.

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REPORT REGARDING VOTING CARDS.

The Secretary submitted a report from the Council regarding the result of the vote on the question of the night of meeting, together with a recommendation that the Friday be adhered to. This recommendation was adopted.

A report from the Council was submitted recommending the appointment of a committee to revise the rules, and it was remitted to the Council to revise them and to submit a report to the Society.

SEEDLING POTATOES.

A number of Seedling Potatoes raised by Mr W. R. Farish, Amisfield Tower, Dumfries, were exhibited, and the following record of their parentage, treatment, and yield, was submitted by Mr Farish, and read by the Secretary.

The following are the varieties of seedling potatoes:

	Parentage.	No. of Tubers.	
A. 1.	Dobbie's Central	15	Late
B. 1.	Do.	23	,,
A. 3.	Northern Star	14	,,
A. 4.	The Crofter	12	,,
B. 4.	Do.	20	,,
C. 4.	Do.	17	,,
A 5.	Fidler's Record	12	Early
A. 6.	Duchess of Cornwall	25	Late
A. 7.	Up-to-Date	12	,,
B. 7.	Do.	20	2nd Early
C. 7.	Do.	17	,,
A. 9.	The Factor	7	Late

All the same numbers are from the same plum.

TREATMENT.

March 28th, 1905—Sowed seed under glass. April 28th, 1905—Pricked into boxes. May, 18th, 1905—Planted outside, 30 inches apart in the rows and 12 inches between the plants, and put a slate deep down between each variety to keep them from mixing. The plot was manured with farmyard manure in autumn and dug down. In spring it was sown with kanit, and later

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covered with leaf mould, which was dug down, after having lain on the surface for a week or two. When planting out I gave each plant some sand to give the tender rootlets a chance. When ready I gradually earthed them up, giving them occasionally a little kainit and superphosphates. When I raised them on the 5th October, if I had a shaw showing any disease, I discarded the lot, but I had only four shaws showing any.

THE FAUNA OF GLENCAIRN. III. THE FISHES. By Dr J. W. MARTIN, Newbridge.

1.—THE PIKE OR JACK (*Esox lucius*).

The curse of many of our fine trout lochs and streams. It is more numerous than most rod fishers desire, but of late years it has not been seen in any quantity in the river Cairn to my knowledge, although still numerous in Loch Urr in the confines of the parish. It seems there to have almost exterminated the trout, and takes toll of young mallard, black-headed gulls, and any other chicks that come within reach of its terrible jaws. From a rod fisher's point of view it is almost worthless, giving little sport, as it is necessary to use very strong tackle to resist the sharp teeth and consequently is more easily brought to net. Their flesh is also coarse and dry, and is only palatable when disguised by the skill of some culinary artist. It is extremely retentive of life, and instances have been recorded of its survival after hours out of the water. Stories of its voracity are numerous. Some years ago several were caught in this district weighing from 5 to 10 lbs., all by night lines. The Pike lives in a hole principally, and there watches for its prey, which is very multifarious. Its colour is olive brown on the back, lighter hue on the sides varied with green and yellow, while the abdomen is silvery white.

2.—THE PERCH (*Perca fluviatilis*).

Unless it be in Loch Urr or private ponds, I do not think there are any in the Cairn or its tributaries.

3.—TROUT (*Salmo fario*).

The Trout is still fairly plentiful in most of the burns and streams of the parish and district, but not nearly so numerous or well-grown as it seems to have been fifty years ago. Odd fish,

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however, still run to considerable weight, one killed near the village of Moniaive two years ago turning the scale at 5¼ lbs., while two others weighed over 3 lbs. The silting up of many of the old spawning beds, through the excessive draining on the hills, and the consequent sudden spates, may have helped to diminish their numbers; but it is also accounted for by the extra number of rods now on the water compared to former times. [Other agencies may be affecting the ova, such as tame ducks, otters, birds, etc.] The dastardly practices of the night poachers, with salmon roe, net, and other illegal methods, contribute also to decrease the number of trout. In the Cairn the trout vary very much in colour. In the deeper parts one often gets them very dark, whereas others are of a beautiful clear yellow colour, with the flesh of a pinky shade. The spawning season extends from November to February, and one rarely kills a well-mended "Kelt" before May. They quickly improve about the season of early spring. The burnie or moor trout might be called a distinct variety or species, seeing that it spawns in its habitat. It is dark in colour and of smaller size. The bulltrout, according to some, is probably a full-sized river trout. It is classified as Salmo eriox, and corresponds to the griseus or gray trout of the Welsh rivers. It resembles the salmon, but is inferior to eat. It is often mistaken for salmon or grilse, and is sometimes sold as such, but may be easily detected from the body being more thickly spotted with brown, and the paler colour of its flesh when cut. I have not heard of them being taken in the Cairn, although they have been killed in the Annan. They are very common in the Tweed. It ascends rivers to spawn, and visits the sea to recuperate, like the salmon. It is possible they may have been taken in mistake for salmon in this district. The great lake trout, Salmo ferox, is not found to my knowledge in any of the lochs in the district.

4.—MINNOW (*Leuciscus phoscimus*)

Is fairly numerous, and may be seen in considerable shoals in the shallow back-water of the Cairn during the summer months.

5.—LOACH (*Namaechilus barbatula*).

This somewhat sluggish fish is fairly plentiful in most of our streams, though nowhere can it be said to be numerous; although its brownish colour, which matches so perfectly the stones among

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which it rests, and its habit of keeping for the most part to the bed of the river, may help to conceal its numbers. It is locally known as the "beardie," and I remember well while attending the parish school we used to consider it a great amusement to go "nicking beardies." It is of small size, rarely exceeding 5 or 6 inches in length, and is easily identified by the 6 barbels on the upper jaw, which, no doubt, give to it its local name of "beardie." It belongs to the carps. The Bullhead or Miller's Thumb (*Catus gobio*) is another common fresh water fish very like the above in habit and appearance, but I am not aware that it is found in this locality (the Cairn).

6.—THE STICKLEBACK (*Gasterosteus aculeatus*).

The 3-Spined Stickleback is the only variety found in the Cairn or neighbouring lochs, and one can call to mind the pleasure with which you admired its brilliant colouring when just brought to land in a small net, or even with the hands among the gravel, together with a lot of minnows. This colouring we now know is peculiar to the male at the spawning season. It does not appear to be numerous, and is not a desirable acquisition to the river from the fisher's point of view: this because of its pugnacious habits and voracious appetite for the fry of other fish.

7.—FLOUNDER, SCOTCH FLUKE, SWEDISH FLUNDRAS (*Pleuronectis flesus*).

Is not found in the Cairn of the higher district, but is so in some of its affluents into the Nith. It may here be remarked that there are extensive falls over high rocks above Cluden Mills which prevent fish of various kinds from ascending the Cairn.

Here in this connection may be mentioned the

8.—GRAYLING (*Thymallus vulgaris*),

which is very plentiful below the falls and down to the Nith. This fish is characterised by a larger dorsal fin, and the flavour of the flesh when newly cooked is compared to wild thyme, hence the generic name (title). It may grow to 4 or 5 lbs. weight, and is in best condition from October to November.

9.—EEL (*Anguilla vulgaris*).

The Common Eel is very plentiful in this district, and often proves a great nuisance to the juvenile bait fisher, from its sly

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mode of removing the bait without being hooked, and tangling the tackle when landed by the twisting and turning of its slimy body. They do not grow to any great size, although one was taken in the Dardarroch portion of the Cairn within recollection that weighed several pounds, and was fully two inches in diameter and over three feet long. Their mode of propagation was a much discussed subject among naturalists for many years, but it is now generally believed that they migrate to the sea for the purpose of spawning, the young alone returning, while the old ones die. The Eel is not much prized as food, at least in this district, though when denuded of its skin and well cooked it is not at all unpalatable. Skinned eel tails make good bait for catching pike. I have known of a tame eel fed by a person daily in a burn on curds. It came regularly for its meal.

Often when drains are cleaned out in marshy land eels are found in great abundance imbedded in the mud. They may be hybernating or at least fasting.

10.—LAMPREY (*Petromyzon fluviatilis*)

does not occur above the Falls of Cluden in this district. I have already brought a specimen before the Society and shortly described it—caught at Cluden Rocks, 18th October, 1901; 22 inches in length, and evidently a female.

11.—SALMON (*Salmo salar*).

This king of British river fishes is not so plentiful in the Cairn or its tributaries as it used to be, owing to the many obstacles which it has to encounter on its annual journey from the sea, for the purpose of spawning. Few, if any, find their way to the higher reaches of the river before the month of July, and these of moderate weight—the largest I ever heard of being taken weighed about 15 lbs. The general run is from 3 to 10 lbs., fish of the latter weight being scarce. It quickly loses its brilliant silver sheen in the clear waters of the Cairn, and although it gives good sport in the autumn, the flesh of fish caught then is generally soft and without flavour, as it is almost impossible to secure a fish that has been less than a week out of the sea, owing to some of the rocks it has to surmount being impassible, except during a heavy flood. They may consequently have been in the river for a month before reaching the higher portions of the

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district. The Cairn has many splendid pools suitable for salmon, and might be one of the best rivers in Scotland had the fish free access from the sea.

12.—SEA TROUT (*Salmo trutta*).

The Sea Trout, though found, is not at all plentiful in the Cairn, a few being caught by rod each season. I saw one taken that weighed 3 lbs., but the average for this district is from 1 to 2 lbs. It is considered a migratory variety of the common brock Trout, but there is such a diversity of opinion regarding the various salmondiæ that it is difficult to decide regarding them. There is no doubt, however, as to their resemblance to the common trout during the spawning season, though they are beautifully silvered and dotted with black spots when they first quit the sea on their annual migration. In the South of Scotland it is known in its grilse state by the name of Herling, and in other parts of the country as Phinnock or Pinnock or Whinnock, also Whitling.

GLEANINGS OF OLD DUMFRIES. By E. J. CHINNOCK, LL.D.

UPKEEP OF THE CASTLES.

1291, Nov. 25.—To Sir Alexander de Bayllol, chamberlain, or to those holding his place within the aforesaid kingdom, William de Boyville, knight warden of the Castle of Dounfries, Kyrkcutbriht, and Wyggetone, wishes health, Know that I have received from the baillies of the burgh of Dounfries £8 of the Sterlings for the support of my house held in the aforesaid castle, by the hand of Robert de Nam, burgess of the same burgh from his farm the term of St. Martin last past, and therefore I beg you to be so kind as to allocate to the same baillies the aforesaid money of £8 within the sum of money which you owe to me for the custody of the aforesaid castle assigned to me by the illustrious prince the lord Edward king of England & superior lord of the kingdom of Scotland. In evidence of which thing I have had this my letter patent given to the same baillies. Given at Dounfries, on the day of St. Katerine in the year of Grace 1291.

1292, March 24.—W. & R., by divine permission bishops of St. Andrews & Glasgow, John Cumyn, James the seneschal of Scotland & Brian son of Brian, guardians of the kingdom of Scot-

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land, appointed by the most serene prince lord Edward, by the grace of God, the illustrious king of England, superior lord of Scotland to Alexander de Balliol, chamberlain of Scotland, or to those who hold their place or deligated, wish health. We command you in the name of the same king of England and order you to pay to Richard Siward, knight, 40 marks of the Sterlings for the three castles in Galloway & Nithsdale of which he has the custody, protection & entry from the Lord's day (23 March) next after the feast of St. Cuthbert the Confessor last passed, and do not omit this. And we will make the said 40 marks to be allocated to you more fully in your first accounts. In evidence of which thing we have had this letter patent sealed with the seal designed for the rule of the kingdom of Scotland. Given at Edinburgh 24th day of March in the year of Grace 1291.

THE SUPPORT OF THE HOLY FRIARS.

1297, Novr. 23.—Edward by the grace of God king of England, lord of Ireland and duke of Aquitaine, to his treasurer of Scotland health. We command you to examine the rolls of Alexander, formerly king of Scotland, & of John, lately king of Scotland, which you have in your keeping as it is said, of the accounts themselves rendered of the farms of the towns of Berewyke, Rokesburghe, Hadintone, Dumfres, & Forfare, from which farm of Berewyke the Minor Friars of Berewyke each week in the year for their support 3 shillings and a pise of wax yearly (120 pounds); and of which farm of Rokesburghe the Minor Friars of Roxburghe each week in the year 3 shillings & 18 stones of wax for the support of the light in their church, and one cask of wine per annum for celebrating divine service there; and from which farm of Hadintone the Minor Friars of Hadintone 3 shillings each week in the year for their support, and from which farm of Dumfres the Minor Friars of Dumfres each week in the year for their support 3 shillings & 17 stone of wax and one pipe of wine per annum; & of which farm of Forfar, the Minor Friars of Dundee £10 of the Sterlings & 20 lbs. of wax per annum by different charters formerly of the king of Scotland; what the same friars have thence they have been accustomed to receive as they assert, of that which happens to be found in the aforesaid rolls of the receiving & allocation of all the things which the aforesaid friars claim to have, inform without delay our be-

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loved and faithful John earl of Warenne, guardian of the kingdom & land of Scotland, remitting to him this brief. Witness J. Earl of Warenne, guardian of the kingdom & land of Scotland at Jeddeworthe, 23rd day of November in the year of our reign 25th. (On the back)—For the Minor Friars—In the time of King Alexander, in the year of Grace 1281, Dunfres. Item, in support of the Minor Friars of that year 117 shillings. Item, to the same Minor Friars of Dunfres from the enquiry of the sheriff of Dunfres it is found as follows:—Item, 17 stones of wax, 5 shillings.

COMPLAINTS AGAINST THE SHERIFF.

April, 1304.—Complaints against Sir Matheu de Redman, sheriff of Dumfries. He imprisoned William Jargon, & notwithstanding a fine of 40 shillings given for his goodwill, impressed all the carts in the country & carried off William's corn to the value of 10 Marks. And though the king of his grace gave William and other goodmen of Dumfries seisin of the land Sir Matthew by duress extorted fines from them, some 1 mark & others more or less, forgetting possession, and he and his sergeants seek occasion to grieve & distress the poor people by tallages. When William, who was in the king's service guarding the town, saw Sir Matthew's outrages and was going to complain to the Guardian and Treasurer, Sir Matthew seized his horse & keeps it to his damage of 100 shillings & more. He also took all the beasts that came one market day to the number of 100 oxen & cows, and afterwards took fines before delivering them except 5 cows which he sent to Stirling; 2 of these being taken from a poor stranger Thomas of Hardingstone by name, who had bought them for 16 sh. & keeps them still, though his sergeant had 6 pence to deliver them up. John de Heytone prays remedy from the king & council against the said Sir Matheu, who has disseised him of the land he held of the Hospital of St. John both before & since the war; & has done the same lawlessly & by means of champerty with Malkun of Terregles, made at the king's last parliament of St. Andrews as contained in the following transcript of said champerty:—

Transcript.—Letters patent by Matheu de Redeman declaring that as Malcolm of Terregles is due to him 100 marks sterling by a recognisance in the king's chancery of St. Andrews payable by equal portions at Easter and Michaelmas next, he binds himself & his heirs, if Malcolm gives & enfeoffes him in one half of all his

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lands, rents & debts which he acquires by plea or otherwise in the county of Dumfries (provided he always goes by the granter's advice) to free him from the recognisances. Appends his seal. Done at St Andrews 28 March in the king's 32nd year. He also took from John's plough worth 2 sh. against law ejected him from 12 tofts in Dumfries called "our Lady's tofts," which John held in mortgage & detains them to his damage of 100 sh. & more. Also from the tofts & burgages formerly of Gilberd le fitz Bel., of which John was possessed before & since the war, and has given seisin of them by means of champerty to John the Grocer, who was never in seisin before the war, nor his father nor mother brother or sister, nor uncle or aunt, and has done this in the petitioner's absence to his damage of £10 & more, as if the lands had been in the king's hands, wherease John was always of the king's party. (Endorsed)—The Guardian of these parts, the Chamberlain of Scotland, James de Dallileghe & Friar Ralph de Lindebee, warden of the Hospital of St. John or 3 or 2 of them, are appointed to hear & determine the case. The Chamberlain of Scotland to issue the appointment under the Great Seal of Scotland. (From Bain's Calendar of State Papers.)

1302-4.—Account of James de Dalileye, clerk for escheats south of the Frith in the 31st & 32nd years of Edward I. The County of Dumfries. He accounted for 9 sh. of the farms of the king's demesnes of Dumfries by the hands of John de Bix for Pentecost last and for £15 of the farm of Metoun of Dumfries by same hands, for Pentecost & Martinmas terms, and for 23 sh. received from the farms of Gurdona, Aleynton, and Alisland by same hands for same terms. Total £16 12s.

For 1304-5.—The same James de Dalileye states that the issues for Dumfries are:—From Sir Matthew de Redman, sheriff, from the issues of his baillary, 100 sh. From said sheriff from the issues of same:—£30.

1305-6.—Account of Gervase Avenel & William Matkynson, John Semerles & John the Lang, bailies of the burgh of Dumfres from the said 15th day of October until the feast of St. Michael next following. The same render account of the farm of the town of Dounfres from the term of St. Martin & Whitsuntide last past of £9 17s 8d, & of 2 shillings coming from the burgage of William Malkymson in the same burgh, being in the king's hand by the eviction of John, son of Laghlan & John Mounville for the time

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aforesaid of 16 pence of yearly rent coming from a certain tenement of William Malkymson in the town afore said, remaining in the king's hand by eviction of William de Hay, and 8 pence rent coming from the tenement of Gilbert the Smyth in the same town remaining in the king's hand by the eviction of the same Gilbert, there is no reply, because the said two tenements lie waste at the time of this account. Of one tenement in the same burgh remains in the king's hand by the eviction of Earl Patrick, there is no reply because the said tenement was waste at the time of this account. The sum of the whole received £10 1s, which they paid upon their account and are quiet.

FORTIFICATION OF CAERLAVEROCK.

1305-6.—Account of Sir James de Dalilegh for Carlaverock Castle of the Fortification of the Castle of Carlaverock. To Sir James de Dalilegh, clerk, for wages of William de Percy, John de Geodeston, & six of their comrades, men at arms & 20 foot archers, one of whom is a serjeant, dwelling within the fortification of the Castle of Carlaverock by order & arrangement of Sir Henry de Percy, then the king's Lieutenant in Scotland, from 29 May to 17 July, both days being reckoned for 1 day, to each man at arms 12 pence a day & to the sergeant 4 pence & each foot archer 2 pence a day:—£28 15s.

FORTIFICATION OF TYBRES.

To the same for the wages of Robert Belle & his comrades men at arms & 6 foot archers, dwelling within the fortification of the castle of Tybres by the arrangement of the king from 22 February till 25th September, both days being reckoned, for 216 days, to each man at arms, serjeant, & foot soldier per day as before £223 4s.

FORTIFICATION OF DURRISDEER.

To the same for the wages of Robert Belle & his three comrades men at arms & 12 foot archers, dwelling within the fortification of the Castle of Dorresdere by the arrangement of the king himself from 1 May till 30 July, each day reckoned, for 91 days, each man at arms & foot soldier receives per day as before £27 6s.

(From the Register of the Great Seal of Scotland.) 20th James 1st, 1425, at Edinburgh, 24 January.—The king has

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granted to Hugh Makgilhanche, burgess of Dumfress, to his heirs, and assigns the tenement in the burgh of Dumfresse which was formerly John Smerles's, & has come into the king's hand by reason of escheat, lying on the west side of the great street of the same between the land of the Provost of Linclouden on the one side and the land of Thomas Gibson on the other side. The farm of and the land of Thomas Gibson on the other side. The farm of the burgh & other services owed & accustomed to be paid to the king; and to the heirs & assigns formerly of D. Duncan de Kylpatrick of Thorthorwald, knight, 5 shillings & 4 pence yearly.

1st December, 1906.

Chairman—The PRESIDENT.

NEW MEMBER.—Mr A. Weatherstone, Bank of Scotland, Dumfries.

OLD PUBLIC LIBRARIES IN DUMFRIES. By G. W. SHIRLEY.

1717.—That is the first date I can find on which mention of a library in Dumfries is made. It occurs in Dr Burnside's MSS. "History of Dumfries" among his extracts from the Presbytery records. The portion relating to the Presbytery library is as follows:—"4th September, 1717—The first regulations anent the library. 11th March, 1730—The library purged. 2nd February, 1731—Ten pounds received for the books sold. 4th March, 1729—A house for the library to be built. The town to pay £60 and the Presbytery £30 upon their obtaining a legal transmission of the piece of ground, and of such a share of the house as is condescended upon. For this sum the ministers gave their bill, 1st April, 1730."

I have here an old MSS. catalogue, unfortunately incomplete and without date, of the books belonging to the Presbytery of Dumfries. It is possibly the original MS. of the catalogue printed in 1784 by Robert Jackson, Dumfries, which is preserved among the books of the Antiquarian Society. This catalogue runs to 50 pages. It is well printed, and shows the press and shelf of each book. The majority of the books are theological and ecclesiasti-

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cal, but there are many of general interest, including classics in the original, and French and Spanish works. There are many collections of Acts of Parliament, and many English classics of great value, including Sir Thomas Browne, Sir Walter Raleigh, Bacon, Butler, Baxter, Samuel Rutherford, etc. That many odd books had crept into the collection is apparent from the following entries:—"Balmford's Application of Habbakuk's Prayer to the Present Times," "Beddle Dispossessed, or his Catechism Reformed," "Byefield on Mineral Waters," "Bradshaw on Justification," "Beer: Warm Preferable to Cold," etc. There is also quite a collection of books on fruit culture. Many of the entries are of great interest to the bibliographer, including as they do a great many first and curious editions.

There is an abiding tradition to the effect that the library contained a prayer book which was used by Charles the First at his execution. Two Common Prayer Books, dated respectively 1637 and 1549, appear among the entries, though the former, being a folio, is not likely to have been the book in question.

I have here also the record-book of issues—unfortunately also incomplete. The first entry is "July 12, 1732, given out to Mr Robinson, The Feeholder (a book edited by Addison) and Watts on Practical Religion," the entry being signed by Alex. Robisone. Names occurring frequently in the book are Ed. Buncle, Geo. Duncan, W. M'Millan, Rob. Patoun, Will. Irvine, Luke Gibson, Rob. Wight.

This issue-book also reveals the fact that in 1736 an arrangement was come to by which citizens might use the library on the payment of a fee. The entry is as follows:—"March 8th, 1736. —The names of those who entered cives and agreed to observe the rules relating to the library on their part, which by their respective subscriptions they oblige themselves to do—John Gilchrist, Jo. Hynes, Thos. Kirkpatrick, Jas. Dickson, Jas. Ewart, Alex. Copland." The next entries are for the second year, and the subscription is five shillings. These entries finish with the name of Capt. Riddell of Caryeld (Carzield?), Feb. 22, 1771.

Nothing more have I been able to find about this Presbytery library until 1885. The Presbytery-house at this time had got into a semi-ruinous condition, and the books were in a very neglected state. A committee was appointed, consisting of Dr Wilson, Mr Underwood, and the Rev. Mr Weir, which attempted

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to make up a revised catalogue, but the work involved a good deal of labour, and was never completed. Ultimately it was decided to send the books to the General Assembly's library in Edinburgh. This was done in 1885. They are now well preserved, and it is probable that a catalogue of them will be forthcoming shortly.

1750.—About this date must have been founded "The Society Library," for it is advertised in Oliver and Boyd for 1845, as having been "Established a century ago." It had in 1845 thirty proprietors, and the librarian was John Sinclair.

The only other record of this library that I have found is the "Catalogue of The Society Library, Dumfries, taken 24th June, 1851," at which time it contained some 2300 volumes. From the rules it appears that the subscription was £1, and that members of the Dumfries and Galloway Club were eligible to the use of the library on the same terms as the original proprietors. The librarian's salary was £4 annually.

What became of the library I have failed entirely to discover. The list of members in 1851 was as follows:—Robert Adamson, John Babington, W. T. Carruthers, Col. Clark, rep. of the late Thos. Clark, John Clark, James Connell, John H. Craik, rep. of the late Thomas Crichton, Major Davis, John Laurie, Admiral Lennox, John Lyon, J. M. Leny, A. H. Maxgwell, Wellwood Maxwell, Francis Maxwell, William Maxwell, Sir J. S. Menteath, Bart., J. Macmorrin, W. M'Lellan, John Staig, R. Threshie.

It evidently existed as late as 1859, for among the final entries is Darwin's Origin of Species. The collection was a very fine general one, rich in travel, biography, and history. As it appears to have been the finest collection of then current literature gathered in Dumfries, I should like very much to learn what became of it.

1792.—The Dumfries Public Library was established in this year "as a general benefit to the town and neighbourhood." Burns' connection with it has kept it in greater prominence than any of the other libraries. An advertisement in the "Courier" dated Nov. 14, 1838, informs us that the committee propose reducing the entrance fee from ten to three guineas to induce more members to join. At that time they state that they have a library of 3000 volumes of standard excellence. There were seventy-two subscribers in 1841. From 1841 to 1851 at any rate, the

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subscription was 10s, and the librarian was James M'Robert. At the latter date (1851) they had 1400 volumes in their possession, a considerable reduction on the former estimate, you will notice.

1811.—In the "Courier" for September 24, 1811, appeared an advertisement inviting proposals of members for the Subscription Reading Room.

1819.—This is the earliest date I can find upon a book belonging to the Dumfries Law Library. It occurs in an inscription on a copy of Stair's "Institutes, 1681," and states that the book was presented by Christopher Smyth in 1819. The collection of the "Dictionary of Decisions" dates from 1811, so it is possible the library may have existed earlier than 1819. Many of the books are dated 1852. In 1865 the Faculty of Procurators of Dumfriesshire was constituted and the Library properly taken care of. It is now a collection of 500 or 600 volumes, almost entirely law books. About this date also must have existed the Dumfries Medical Library, of which a few books are still in private hands in the town. The date of its origin and dispersal I have failed to find.

1825.—The Mechanics' Institute—A preliminary meeting to form this was held in the Trades' Hall on Tuesday evening, March 15, 1825, with Provost Thomson in the chair. On April 1 a meeting of subscribers was held, and office-bearers were appointed as follow:—President, Provost Thomson; vice-president, Mr Thomson, architect; treasurer, Mr Barker, Bank of Scotland; secretary, Mr Carson, writer; with fourteen ordinary members of committee and four honorary members.

The project was taken up with great avidity. On May 3rd John Staig (collector of customs) had presented them with £500, and William Taylor with £330. By May 23rd there was a membership of 200. The books that had been presented were valued at over £70, and the library was opened in a room in the Academy set apart by the magistrates for that purpose. The original subscription was 8s, and 4s for children of members and apprentices. Lectures were regularly given and classes held on mechanics and science in the Assembly Rooms.

Its fortunes were very varied. It appears to have possessed some 600 volumes in 1838, and an exhibition was held in the old Assembly Rooms in 1841 "to reduce," says M'Dowall, "the debt on the erection of the hall," though it does not appear what

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hall. It twice or thrice almost ceased to exist. I find that in 1855 Messrs Blackwood & Sons, Edinburgh, made a goodly present of books to the Institute. Among these are two notable ones—"The Strayed Reveller, and other Poems," by A., 1849. This is marked "From the Author" on the fly-leaf, and is the first edition of Matthew Arnold's poem. It is valued at about £2 now. The other is "The Seraphim, and other Poems," by E. B. Barrett, 1838. This would have been valuable had it not been badly mutilated.

In 1861 the Mechanics' Hall was erected, and in June, 1865, an exhibition was held again to reduce debt. We have here copies of the catalogues of both exhibitions. At what date the Institute came into the possession of the books of the Dumfries Public Library I have not been able to determine. It must have been before 1877, for the catalogue (pp. 64) of that date is divided throughout into two sections "D." and "M.," and many of the books at present in our reference department correspond with the "D." section. The "D." section at that date is clearly the better one. Both sections contain fiction. I have also a catalogue (pp. 61) dated 1895, which shows considerable change in the Library—a decided decline on that of 1877. In 1897 a large addition of nearly 1400 volumes was made by the legacy of the Rev. W. N. Dodds. It was a very mixed addition indeed, but contained many good books. The three collections together amounted to 6995 volumes when handed over in 1903 to the Ewart Public Library. 1200 were available for the lending department. Practically all the fiction had to be destroyed.

1863.—The first presentations made to your own library were in 1863. One of them, "The King's Quair, a Poem by James the First, ed. by E. Thomson, Air, 1815," I have here. In 1881 the collection was housed, by agreement, in the Observatory, and consisted of 37 volumes, besides a great many pamphlets and transactions. Subsequently it was removed to the restored Presbytery-house, and finally to this building. The Robert Dinwiddie Library was presented in 1891, and consisted of some 240 volumes. A complete catalogue of the collection was published in 1898.

1840 (?).—There must now be mentioned the congregational libraries in the town, which latterly became important. The first of these was Loreburn Street U.P. Church. It was founded

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during the ministry of the Rev. James Clyde—that is, before 1851.—It has at present over 900 volumes.

1883.—Next in point of date is Irving Street Congregational Church. It was started in 1883 with half-a-dozen volumes, the Rev. W. H. Pulsford being the moving spirit. It now has 300 very well selected volumes.

1888.—The congregational library of Greyfriars' was established in 1888. There have been at least two catalogues compiled, 1891 and 1902, and now the Sunday School and congregational libraries together number 3000 volumes.

1887.—Free St. George's Library was established March 17, 1887, £50 having been received from a lady member of the congregation. Two catalogues have been published, 1887 and 1896. Their stock now amounts to over 1000 volumes.

In the Statistical Account of Dumfries in 1841 we find the following statement:—"The Presbytery of this district has a valuable library, besides which there are three others belonging to societies. Of what are called circulating libraries there are four kept by booksellers on speculation, and a select one, open to the public. There also exists a Mechanics' Institute, in the list of whose members appear many respectable individuals belonging to the town. There are already four public reading-rooms."

NOTES ON EXCAVATIONS AT MOFFAT SEWAGE WORKS. By JOHN T. JOHNSTONE, Moffat.

The valley of the Annan at Moffat as we now see it may be said to be a relic of the great Ice Age. An excavation made nearly anywhere down into the till reveals the fact that nearly all the stones are striated or otherwise marked by the grinding and crushing forces of the moving masses of ice in its course down the valley. The flat holms and meadows bordering on the Annan, and known as the Hammerlands and Kerr, have been filled up to a considerable depth from their former level by this action, and partly to the silting up of the ever-shifting beds of the Annan and Birnock waters, which in their course through the ages have meandered at their will over the full width of the valley at some time or other. At the excavation made for the new sewage works constructed in 1901-2 this old land surface

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was laid bare at a depth of seven feet, where it formed a layer of peat moss. The thickness or depth of this peat was just similar to that of the combined turf and soil on any ordinary ground. From portions of this peat, on breaking it up into small pieces and examining it carefully, I gathered a few hazel nuts, pieces of bark, and small pieces of wood. The roots and branches of a large tree were also taken from the excavation at the same depth. A few years ago I spent part of a day examining the peat mosses around Loch Skene. I did not do any digging, but examined where the hags showed a good section. Pieces of wood of varying thicknesses up to one inch and a half in diameter were plentiful, and as far as I could make them out myself, I had specimens of hazel, alder, birch, and oak. The diameter of the one large piece I noticed would be six inches. The specimens brought away were subsequently forwarded to Professor Scott-Elliot at Glasgow. The peat formation at Loch Skene covers a considerable area of ground, as it extends between Whitecoomb and Winterhope Burn head the one way, and along the Tail Burn the other. Loch Skene itself is the result of glacier action, as its waters have been ponded back and formed into a loch by the accumulation of glacial debris and moraine matter which have been deposited in the valley there, the moraines there being one of its interesting features. The Midlaw Burn, which is only separated from Loch Skene by the Midcraig Hill, has cut its way through this moraine matter, which at one time had ponded it back so that the loch formed by it is drained away, and its bed is now a flat meadow, and through time Loch Skene will succeed in cutting for itself a course deep enough to drain itself away similar to the Midlaw Burn. Loch Skene is fully 1700 feet above sea level.

Following upon the reading of the paper there were exhibited specimens of hazel nuts, bark, and other vegetable matter taken from the peat in the trenches, and Permian breccia and striated stones from the glacier drift of the Moffat valley.

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LIST OF WILD AND NATURALISED FLOWERS FOUND ON ST. MARY'S ISLE, KIRKCUDBRIGHT. By MRS JEFFREY, St Mary's Isle Gardens.

Ranunculus acris, Ranunculus repens, Ranunculus bulbosus, Ranunculus Ficaria, Thalictrum flavum, Thalictrum minus, Caltha palustris, Anemone nemorosa, Chelidonium majus, Meconopsis cambrica, Cardamine pratensis, Cardamine bulbifera, Cochlearia officinalis, Capsella Bursa-pastoris, Alliaria officinalis, Brassica Sinapis, Barbarea vulgaris, Helianthemum vulgare, Viola odorata, Viola canina, Polygala vulgaris, Polygala amara, Lychnis vespertina, Lychnis diurna, Lychnis Flos-cuculi, Silene Cucubalus, Stellaria uliginosa, Stellaria graminea, Stellaria Holostea, Cerastium vulgatum, Cerastium alpinum, Sagina procumbens, Sagina maritima, Sagina apetala, Hypericum perforatum, Arenaria peploides, Hypericum linariifolium, Linum catharticum, Geranium robertianum, Geranium sylvaticum, Geranium columbinum, Geranium pyrenaicum, Geranium pratense, Geranium sanguineum, Geranium rotundifolium. Geranium dissectum, Geranium phaeum, Oxalis Acetosella, Impatiens Noli-me-tangere, Erodium maritimum, Erodium cicutarium, Vicia lathyroides, Vicia sativa, Vicia tetrasperma, Vicia sepium, Vicia sylvatica, Anthyllis vulneraria, Astragalus glycyphyllos, Lathyrus pratensis, Lathyrus sylvestris, Trifolium pratense, Trifolium minus, Trifolium repens, Lotus corniculatus, Ononis arvensis, Cytisus scoparius, Ulex europaeus, Rosa pimpinellifolia, Fragaria vesca, Fragaria elatior, Geum rivale, Geum urbanum, Geum intermedium, Potentilla tormentilla, Potentilla fragariastrum, Potentilla anserina, Agrimonia Eupatoria, Alchemilla vulgaris, Rubus fruticosus, Prunus spinosa, Epilobium roseum, Epilobium augustifolium, Epilobium hirsutum, Circaea lutetiana, Sedum acre, Sedum Rhodiola, Sedum anglicum, Saxifraga umbrosa, Saxifraga granulata, Chrysosplenium oppositifolium, Sanicula europaea, Hippuris vulgaris, Oenanthe fistulosa, Oenanthe pimpinelloides, Conopodium denudatum, Heracleum sphondylium, Ligusticum scoticum, Daucus carota, Pastinaca sativa, Aegopodium podograria, Adoxa moschatellina, Lonicera periclymenum, Galium Aparine, Galium saxatile, Galium Mollugo, Galium palustre, Valeriana officinalis, Valeriana pyrenaica, Valeriana dioica, Arctium lappa, Bellis perennis, Anthemis nobilis, Taraxacum dens-leonis, Tussilago farfara, Tussilago

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petasites, Sonchus oleraceus, Sonchus arvensis, Doronicum pardalianches, Doronicum plantagineum, Hieracium pilosella, Hieracium sabaudum, Crepis hieracioides, Achillea millefolium, Achillea ptarmica, Carduus heterophyllus, Solidago virga-aurea, Senecio aquaticus, Senecio jacobœa, Centaurea nigra, Aster tripolium, Artemisia maritima, Artemisia absinthium, Scabiosa succisa, Filago germanica, Gnaphalium sylvaticum, Campanula trachelium, Campanula latifolia, Campanula rotundifolia, Vaccinium Myrtillus, Primula vulgaris, Primula veris, Lysimachia vulgaris, Lysimachia nemorum, Lysimachia nummularia, Anagallis arvensis, Glaux maritima, Samolus valerandi, Centunculus minimus, Vinca minor, Erythraea, centaurium, Convolvulus sepium, Myosotis palustris, Myosotis arvensis, Lithospermum officinale, Datura Stramonium, Solanum dulcamara, Atropa belladonna, Veronica scutellata, Veronica serphyllifolia, Veronica Hederaefolia, Veronica arvensis, Veronica chamaedrys, Veronica Beccabunga, Veronica agrestis, Veronica Buxbaumii, Veronica montana, Bartsia odontites, Digitalis purpurea, Linaria vulgaris, Verbascum thapsus, Rhinanthus cristagalli, Nepeta glechoma, Lamium album, Lamium purpureum, Lamium amplexicaule, Ajuga reptans, Teucrium chamœdrys, Teucrium scorodonia, Calamintha clinopodium, Mentha arvensis, Mentha aquatica, Thymus serpyllum, Galeopsis tetrahit, Prunella vulgaris, Armeria vulgaris, Statice limonium, Plantago coronopus, Plantago major, Plantago media, Plantago lanceolata, Chenopodium urbicum, Atriplex patula, Salicornia herbacea, Suaeda maritima, Suaeda fruticosa, Polygonum bistorta, Polygonum aviculare, Polygonum persicaria, Polygonum lapathifolium, Rumex acetosa, Rumex acetosella, Hippophae rhamnoides, Thesium linophyllum, Euphorbia lathyris, Euphorbia peplis, Mercurialis perennis, Arum maculatum, Triglochin maritimum, Triglochin palustre, Orchis maculata, Orchis mascula, Orchis pyramidalis, Orchis purpurea, Listera ovata, Listera cordata, Epipactis latifolia, Iris pseudacorus, Galanthus nivalis, Crocus vernus, Narcissus pseudonarcissus, Scilla festalis, Ornithogalum umbellatum, Allium ursinum, Allium ampeloprasum, Polygonatum multiflorum, Ruscus aculeatus.

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15th December, 1905.

Chairman—The PRESIDENT.

NEW MEMBERS.—Rev. J. M. Campbell, St. Michael's Manse; Rev. Wm. Edie, Greyfriars' Manse; Rev. G. T. Ferguson, St. Mary's Place; Mr J. M. Bowie, architect; Mr John Cowan, Glenview, Maxwelltown; Mr John Charlton, Huntingdon Lodge, Dumfries.

THE CASTLE OF DUMFRIES. By JAMES BARBOUR, F.S.A.Scot.

PRELIMINARY.

The pages of general history reveal little of the character and circumstances of the Castle of Dumfries; nevertheless, together with the Castle of Lochmaben, it takes its place as a fortress of outstanding importance in relation to the control of the south-west parts of Scotland during the Edwardian wars. Our castle was held for lengthened periods by the English, and it is associated with the advent of Bruce, being the first stronghold captured by him from the English, and in which he and his followers found refuge after the slaughter of Comyn in the neighbouring church of the Greyfriars' monastery. The writer has gathered information relative to the subject, from such sources as he could command, and has ventured to put together the following pages, allowing the original papers to speak largely for themselves, in the hope of reviving interest in a local monument environed with the flavour of former times.

The authorities chiefly relied on are prints of original documents preserved in the London archives—"The Wardrobe Account of the 28th Year of Edward I.," printed by the Society of Antiquaries of London, in 1787; "Documents Illustrative of the History of Scotland," by the Rev. Joseph Stevenson; "Calendar of Documents Relating to Scotland," by Dr Joseph Bain; etc. Dr E. J. Chinnock supplied extracts from several original sources, and by his favour translations where required have been made.

EARLY NOTICES OF THE CASTLE AND ITS SITE.

Dumfriesshire is studded with the remains of ancient castles. Bruce possessed Lochmaben, Comyn owned Dalswinton, Caerlaverock belonged to the Maxwells, and Baliol had Buittle, in

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RIVER NITH
MAXWELTOWN
The Friary
RIVER NITH
Dock Park
Troqueer Moat
Castledykes
The Kings Castle of Dumfries

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Galloway. The Castle of Dumfries differed from these inasmuch as no family name is associated with it; it was the King's Castle.

As the situation has lately come to be in doubt, it is desirable to differentiate the spot where the castle stood; events and locality frequently lend colour one to the other. The earliest known references to the castle are contained in charters of the time of William the Lion (1165-1214). One of these gives it the appellation of "The Old Castle of Dumfries," and the terms of another are important as showing the direction in which it lay. The document is a lease or feu-charter, by the Abbot and Convent of Kelso in favour of Henry Wytwell, a burgess of Dumfries. The following is the text as translated, taken from a "Notice of some Old Documents Relating to Dumfries," by the Rev. John Cairns, M.A.*:—

"On the first Tuesday after the feast of the Beheading of John the Baptist, this agreement was made between the religious men, the Lord Abbot of Kelso and the Convent of the same place, on the one side, and Henry Wytwele, burgess of Dumfries, on the other, viz., that the said Lord Abbot and the Convent of the same place conceded and demised to the said Henry and his assignes the whole of those lands which Malcolm the son of Utred of Terregles held from the decease of the formerly named inheritance of William, son of Bele; with tofts and crofts in the territory and town of Dumfries, . . . as they lie, viz., Between the land of St. John, which lies beside the cemetery of the Mother Church of Dumfries, on the north side, and so by the road which leads from the town of Dumfries towards the castle as far as the road which leads towards the chapel of St. Lawrence of Keldwood on the south side, and so towards the east beside the Crown lands as far as the Dumfries Burn which falls into the mill pond of Dumfries."

The chapel of St. Lawrence no longer exists, but Kellwood remains, and the road described as leading towards the chapel is that now known as Craigs Road (it crosses the Dumfries burn, or mill-burn, as it is now called), and St. Michael Street, which leads from the town southwards past the cemetery and Craigs Road, corresponds with the road of the charter, which leads from

* Transactions of the Dumfriesshire and Galloway Antiquarian Society, 1892-93.

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the town of Dumfries towards the castle. Following St. Michael Street southwards past Craigs Road we shortly arrive at the place bearing the suggestive name of "Castledykes," which apparently represents the ancient Castle of Dumfries of the Kelso Charters; and confirmatory evidence is forthcoming.

Sir Eustace de Maxwell of Carlaverock held the office of Sheriff of Dumfries for Edward III. of England in 1335, and an item of his account of the revenues reads:—"Of the mote of the castle and certain royal lands called Kingsholm at Dumfries, which were won't to be worth 60 shillings, there is no reply" (being waste). The Castle and Kingholm are here conjoined, as Castledykes and Kingholm lie adjacent to-day. As usual a chapel was connected with the castle. The Chapel of the Castle of Dumfries was in part a subject in dispute between Ralph, dean of Dumfries, and the Convent of Kelso in the beginning of the thirteenth century, and mention is made of it in several documents. Dr George Neilson, in a communication made to the Dumfries and Galloway Antiquarian Society in February, 1905, exhibited a document concerning the "crukitakyr" on the road from the Chapel of St. Mary the Virgin at Castledykes, dated 26th March, 1532. Its interest lay, Dr Neilson said, in the mention of the Castle Chapel of St. Mary in Castledykes.

But the most conclusive document connecting Castledykes with the ancient castle of Dumfries is a manuscript report made by a military officer of the English Government about the period 1563 to 1566, regarding the defensive condition of Dumfries. The distinctive name, "The Old Castle of Dumfries," is repeated, showing its identity with the castle of the early charters. "The Aulde Castell of Dumfreis," the report proceeds, "fyve myles and a half within the mowth of the Nytht, standing upon the side of the same, very good for a fort. The platt and ground thereof in manner lyke to Roxburght Castell; it may late the town and the brige of Dumfreis and receive boates of ten tounes as said ys furtht of Englonde. Distant from Holm lordship over the revare of Sulvaye xvi. myles. . . . This towne of Dumfreis standeth vi. myles within the mowth of the Nytht the head towne of the Schyre. The lord Maxwell hatht a fair house battled within the towne, but not tentable nor strong agains any battery or gownes."*

* Armstrong's "Leddesdale."

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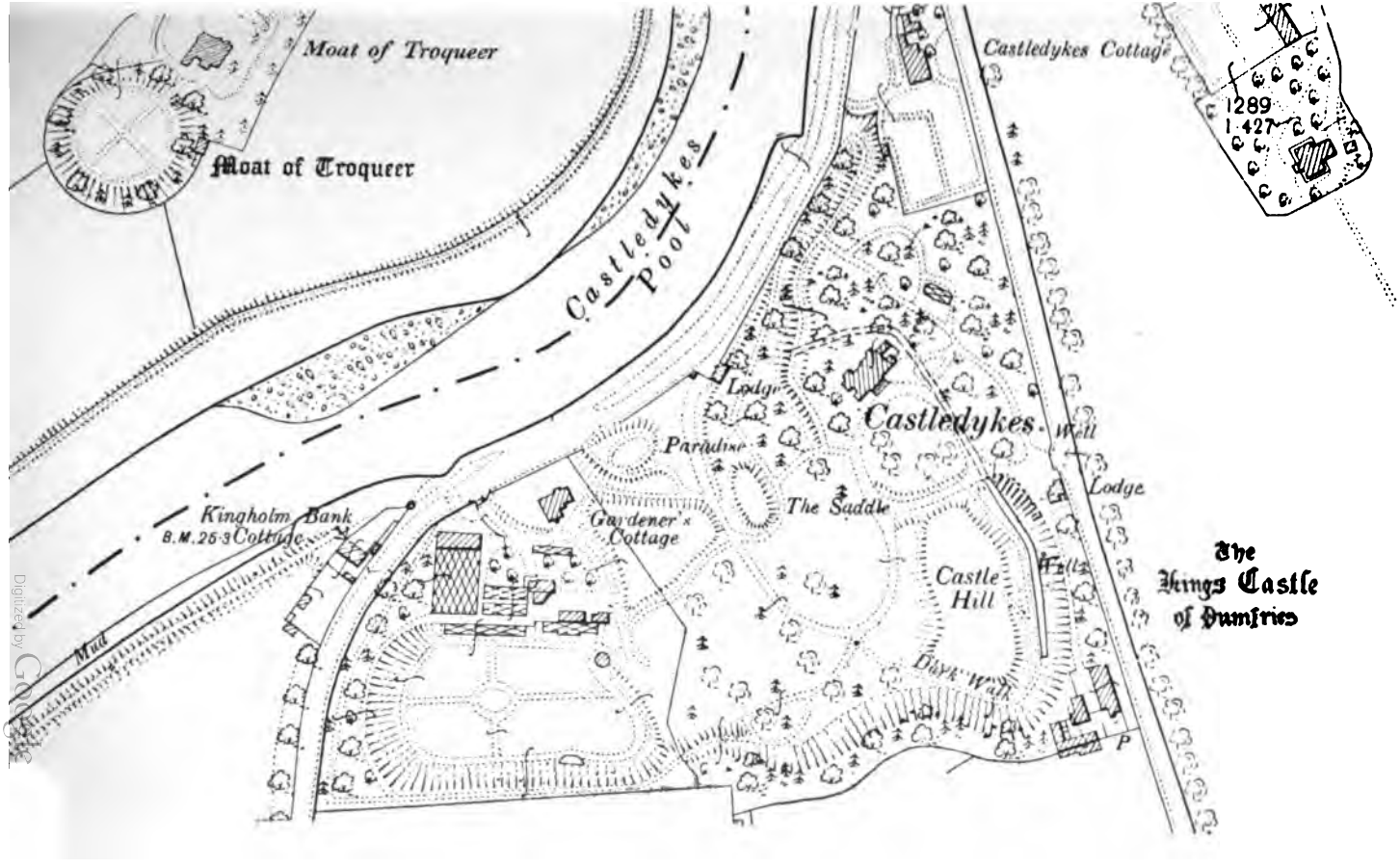

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The report proves that the Castle stood on the side of the river five and a half miles within the mouth of the Nith, and the town was ~~and a half miles within the month of the Nith, and the town was~~ six miles within the mouth of the Nith, that is to say, half a mile further up the river than the castle. Castledykes similarly stands on the side of the river, and is just half a mile, as measured on the Ordnance Map, below the site of the South Port of the town at the corner of St. Michael's Cemetery; and so its claim to represent the ancient castle of Dumfries is fully confirmed.

The report shows also that another castle situated within the town, which has generally been mistaken for the Castle of Dumfries, was a house of the Maxwells. The house occupied the site covered by the present Greyfriars' Church at the head of High Street. Its history will be noticed later.

Finally intrinsic evidence presents Castledykes as a natural strength adapted to the purpose of a fortress; and well preserved vestiges of ancient fortifications are yet exhibited within the grounds.

CASTLEDYKES.

As it stands to-day Castledykes, or The Castledykes, as it is written in Dr Burnside's MS. History of Dumfries, notwithstanding many changes consequent on the building of a small mansion and adapting the grounds for ornamental and garden purposes, retains something of the character of the ancient Norman Castle of mote and bailey type. The mote, an elevated oblong mound, lies on the east part of the ground furthest from the river, and the bailey or lower court extends westwards to the Kingholm Road, and doubtless it covered what is now the roadway, terminating at the river with a high and precipitous rock-faced bank. The extent of artificial formation cannot now be determined, but at least the vestiges of the great ditch, or dyke, which surrounded the mote, and from which the name of the place is derived, constitute a typical specimen of ancient fortification. The ditch remains open at the south end of the mote, and along one-half the east side, up to the present entrance gate. Northwards the east ditch and the north ditch are marked by a large built and covered drain, sufficiently wide and high to allow a man to walk through it, upright. The ditch can thus be followed on three sides of the mote, partly open and partly closed. On the fourth side, except the north corner, no trace remains.

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The open part of the east ditch is excellently preserved and very formidable in apprearance. It measures 60 feet in width at the top and 20 feet and upwards in depth, and its preservation is probably due to the requirements of a small stream of water flowing through it.

FIRST ENGLISH OCCUPATION.

Prior to the death of Alexander III., Scotland was prosperous and peaceful, and during this period history does not record any particular acts of warfare, either defensive or as issuing from the castle gate. Of its civil use there is a glimpse. About the year 1259 inquisition was held in the Castle, Richard, son of Robert, son of Elsa, being arraigned for the murder of Adam, the miller. The two had met in St. Michael's Cemetery on a Sunday, when Adam defamed Richard, calling him "galuvet" (considered equivalent to thief). On the following Thursday, in a scuffle on the street, Adam was mortally wounded, Richard alleged by accident. He said at the time, "I have not killed thee, thou thyself didst it." The barons jurors concur "in omnibus" with the burgesses jurors. They all say that Richard was faithful, but Adam was a thief and a defamer.

Not long after the King's death war broke out as appears by the following extract from John Baliol's Pleas for the Crown:— "The seventh reason is that when the Bishops and great men of Scotland had sworn to defend and preserve the kingdom of Scotland for their Lady, the daughter of the King of Norway, and that they would do fealty to her as their liege Lady, and keep the peace of her land. But the aforesaid Sir Robert de Brus and the Earl of of Karrick, his son, dared to take by force of arms with banners displayed the aforesaid Lady of Scotlands castle of Dumfries, against her peace. And thence the aforesaid Sir Robert advanced to the castle of Botil, and there he caused one Patrick M'Cuffok within the bailey of the same castle to proclaim that all the —— should immediately depart from the land. (The document is here illegible.) The Earl of Karrick with the assent and power of his father took the aforesaid Lady's Castle of Wigton, in Galloway, and killed many of her men there."

In the year 1288 the watchman and gatekeeper were paid, as a gratutity, £1 12s, on account of extra watching by reason of the war raised after the death of the King. The castle had been

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THE DITCH, LOOKING ~~EAST~~. WEST.

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repaired, or enlarged, a few years earlier. In 1265 one Master Peter, a mason, was paid £20 ~~forward~~ at the Castle of Dumfries. It may be noted also that the Friars' Minors are mentioned in the accounts of this same year.

But Alexander III. is dead, and Margaret, the child queen, the golden age of peace is ended, and our castle stands revealed in military guise in the custody, for the first time, of English wardens.

> "Quhen Alysander oure King was dede
> That Scotland led in love and le,
> Away was sons of Ale and Brede,
> Of wyne and wax, of gamyn and glee,
> Oure gold was changed into lede.
> Chryst, born into Virgynte,
> Succor Scotland and remede,
> That stad is in perplexeyte."

Edward I., desirous of effecting a union of England and Scotland, betrothed his son Prince Edward, with the consent of the Scottish Guardians, to the Princess Margaret, heir to the Crown of Scotland, but the death of the young queen frustrated this peace-promoting arrangement. The King, resolutely adhering to his purpose, preferred a claim to the Crown of Scotland, when he should chose to assume it, and meantime caused himself to be recognised Lord Paramount of the Kingdom. Assuming to adjudicate between the several claimants of the vacant throne, the English King demanded the surrender to him of all the Castles of Scotland, pending his decision; and on the 11th June, 1291, transfer was made accordingly. Next year, on the 19th November, Baliol having been adjudged the rightful heir, the Governors of Castles, in obedience to orders, surrendered to the new King.

During this interval of nearly eighteen months, the Castle of Dumfries, grouped with those of Kirkcudbright and Wigtown, was in the custody of English Wardens.

Relative to this period of the affairs of the Castle, we have certain writs and receipts dealing with the wages of the wardens. The usual wage of the warden was a mark a day; frequently payment was in arrear, and consequently the receipts do not follow in the order of the periods of office of the several custodians.

Sir William de Boyville, first in the list of wardens, was an Englishman. His name occurs in an Inquisition held at Car-

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lisle in September, 1280, regarding the law of "Handwarcelle" on the Border. About two years later the Knights and good men of the County of Cumberland, under the King's mandate, elected him sheriff, and Constable of Carlisle Castle, but the King having adopted other views immediately revoked the election, and committed the Sheriffdom and the custody of the Castle to Robert de Brus, Earl of Carrick. Sir William was, on 12th July, 1291, jointly with William de St. Clair, commissioned to take the fealty to Edward of the Bishop of Whithorn and of all Galloway, and thereafter he had the custody of the Dumfries group of Castles.

Sir William acknowledged on 15th August, 1291, having received from the Chamberlain of Scotland 40 marks, wages of 40 days' custody of the Castles, £20 on 5th November, in part payment, and £60 in part payment on the 29th of the same month. On the same 29th day of November he also acknowledged having received the sum of £8 from the Burgh of Dumfries by the hands of Robert de Nam, a burgess of the Burgh.

The following certificate by Brian Fitz Allan, one of the Governors of Scotland, in favour of Henry de Boyville, makes it appear that Sir William died at his post, and was succeeded by Henry de Boyville, presumably a relative.

"March 2, 1292.—To all who will see or hear this letter, Brian Fitz Alan, one of the Guardians of the Kingdom of Scotland, wishes health in the Lord. Know that by the tenor of the present letter we give evidence that the Chamberlain of Scotland and Robert de Forde associated with the same by the Lord King of England, had in command from all the Guardians of the Kingdom of Scotland to pay Henry de Boyville and his comrades as much as is owed to them for the custody of the Castles of Dumfries, Kirkcudbright, and Wigton, of the rest of their wages after the death of Sir William de Boyville. In evidence of which thing we have placed our seals to the present letter. Given at Edinburgh on the Lord's day next after the feast of St. Matthew the apostle, in the year of Grace 1291."

Henry de Boyville's first receipt for £28 sterling in part payment of his own wages and those of his comrades for the custody of the Castles is dated 1st March, 1292, and the second and last bears date the 12th of the same month.

"To all the faithful in Christ who will see or hear this letter,

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Henry de Boyville wishes health in the Lord. Know that I at Dumfries on St. Gregory's day in the year of Grace 1291 received from Sir William Comyn of Kirkintilloch and Maurice de Stubhill 17 marks by the hand of Walter de Crumnistone, their baileff, for the farm of Cyplaunde, in part payment of my wages and those of my comrades for the custody of the castles of Dumfries, Wigton, and Kirkcudbright, by order of Sir Alexander de Balliol, Chamberlain of the Kingdom of Scotland, and Master Robert Heron, rector of the church of Forde, associated with the said Lord Alexander by the most illustrous Prince, lord Edward King of England, and superior lord of the kingdom of Scotland, and by their letters patent directed to the said Sir William Comyn and Maurice Stubhill, which letters patent, together with this letter patent, I have handed to the aforesaid Walter. And because my seal is unknown in these parts, I have procured that the seal of William de Seyncler, under Sheriff of Dumfries, at my request and that of my comrades, be affixed together with my own seal. These being witnesses—Thomas, called the clerk of Dalswinton, and John of the Stone House."

Endorsed, against Henry de Boyville, £11 6s 8d.

January 20th, 1292.—The King and superior lord of Scotland greets the Guardians of the same. We notify you by the present that the commission which you lately made to our dear and faithful servant, Walter de Curry, of the Castle of Dumfries, Wigton, and Kirkcudbright, until our arrival in those parts is ratified."

By the writ following of 28th February, the guardians of Scotland directed the Chamberlain to pay the expenses of those who had hitherto had the custody of the Castles, and to make payment to Sir Walter of 40 marks from the day of his entry to office.

"W and R by Divine permission bishops of St. Andrews and Glasgow, John Cumyn, James Seneschal, and Brian Fitz Alan, guardians of the Kingdom of Scotland, appointed by the most serene prince, lord Edward by God's Grace the illustrious King of England, to Sir Alexander de Balliol, chamberlain of the same Kingdom of Scotland wish health. Because according to the command of our lord the king above said, we have already caused the custody of the Castles of Wigton, Kirkcudbright, and Dumfries to be delivered to Sir Walter de Curry, we command

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and order you in the name of our said lord and king by the present letter to pay their expenses who have hitherto had the custody of the said castles from the day of their entrance until the day when the said Sir Walter received the custody above said, according to the arranagement of our lord the King before named. But from the day when the said Sir Walter undertook the aforesaid custody, pay to the same 40 marks sterling for the payment of his expenses, according to the arrangement of the same our Lord the King. Receiving from the same their letters of receipt for the money paid to them, and we shall make it to be fully allocated to you in your accounts. In evidence of which thing (because the common seal was shut at the time of making the present letter) we have each of us placed to the present our own seals, one after the other. Given at Stirling on Thursday next after the feast of St. Mathias the apostle, in the year of our Lord 1291."

Sir Walter's tenure of office was short. On 28th February, 1292, Robert Heron acknowledged having received from the chamberlain 24 shillings and 5 pence in repayment of an advance he had made to Sir Walter for the custody of the Castles. On 28th of the same month Sir Walter acknowledged the receipt of £10 sterling in part payment of his wages granted to him for the custody of the Castles of Dumfries, Wigton, and Kirkcudbright, beginning to reckon of the first quarter on the 4th day of March, 1292. On 14th May, 1292, Robert Heron, rector of the church of Forde, received from Sir Alexander de Balliol, Chamberlain of Scotland, 24 shillings and 7 pence in payment of another advance to Sir Walter. And Sir Walter on the 28th June, 1292, acknowledged having received from the Chamberlain 5 marks sterling for the arrears of his wages granted to him by the King for the custody of the said Castles.

The last of the Wardens at this period, whose name has come down, is Sir Richard Siward, a mandate for the payment of whose wages for the custody of the Castles of Galloway and Nithsdale was given by the guardians of Scotland on the 24th March, 1292.

Sir Richard acknowledged the receipt on April 26th of 40 marks sterling from the chamberlain of Scotland for 40 days, granted to him for the custody of the said Castles by the lord King of England, beginning to reckon the said 40 days from the

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Monday next after the feast of St. Cuthbert the Confessor (24 March) in the year of the Lord 1292.

Another acknowledgment for wages paid for the custody of these castles at this period, dated 25th June, 1292, runs:—"To all who will see or hear this letter Richard Suard, Knight, wishes health in the Lord. Let all know that I at Berwick on Wednesday the morrow of the birth of St. John the Baptist in the year of the Lord 1292, received from Sir Alexander de Balliol chamberlain of the Kingdom of Scotland and Robert Heron associated to him by the lord King of England, head lord of Scotland, an account of my wages for the custody of the Castles of Dumfries, Kirkcudbright, and Wigton, of the rest of my said wages until the feast of the Holy Trinity (1 June) £18 13s 4d. In evidence of which thing I have given to the same this my letter patent. Given at Berwick the day and year above said."

Sir Richard continued in office in Edward's service until the 18th November. On that day the King by letter from Berwick directed him to hand over the Castles to John de Balliol, to whom the King had granted seizin of the Kingdom of Scotland. So ended the first English occupation, extending over one year and four or five months. Balliol was now King of Scotland, but Edward, apparently without much regard to the change of circumstances, gave instructions for the collection of certain arrears of customs in that kingdom. In regard to Dumfries, the English King wrote from Roxburgh, 10th December, 1292:—"The King and Superior lord of the Kingdom of Scotland to his beloved John de Twynholm farmer of the Burgh of Dumfries, health. Know that those 18 pounds in which you are indebted to us, for arrears of your account from the farm of the aforesaid burgh, we have granted to our beloved Ralph de Handen to be received through your hands this year of the Lord 1292, on the day which may be arranged between you and him, for the 18 pounds which he used to receive annually by the grant of Alexander of good memory, the last King of Scotland, deceased, in return for certain losses which he sustained on the March of the Kingdom of England and Scotland, as he says. And therefore we command you to pay the aforesaid 18 pounds to the aforesaid in the form aforesaid, and we wish you to allocate them in the arrears. Moreover we order our beloved and

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faithful John, the illustrious King of Scotland, to allow you to raise and collect freely and without hindrance the arrears of the aforesaid farm at the next term of St. Martin, wherein you were bound in your aforesaid agreement." And a month later:—Newcastle, 12 January, 1293. By letters patent, and closed, the burgesses of Dumfries are ordered to pay the arrears owed to the King, to Nicholas de Colle, Merchant of Luca, his assign, for the farm of the Burgh of Dumfries, the sum of eleven shillings and five pence.

Little is recorded of the affairs of the Castle during the short reign of King John. The Scottish King in course of time alleged against Edward, that he had possessed himself of his, the Scottish Castles, by violence. Whether the Castle of Dumfries passed in this way we do not know, but Balliol resigned the realm and people of Scotland on 7th July, 1296, and went into captivity, and in the following month of August, Robert de Joneby held office as Sheriff of Dumfries for the English King.

In the beginning of June of the following year, the King appointed Sir Henry de Percy and Sir Robert de Clifford to arrest, imprison, and "justify" all disturbers of the peace of Scotland or their reseters, and commanded the Sheriff and others of Dumfries to render them effectual aid. At this time Scotland, deserted by her natural leaders, bowed before the English power. But not for long. The patriot Wallace on September 11th of the same year (1297) overpowered the English at Stirling Bridge, and cleared the country of the invaders. This great achievement was, according to Henry the Minstrel, consummated at Dumfries, and the accuracy with which the Minstrel threads the intricate route, traversed by Wallace in pursuit of his foes, goes far to establish the trustworthiness of the story. Henry relates how Wallace, with a company of three hundred chosen men mounted on picked horses lightly harnessed, rode in pursuit, through Durisdeer, Morton, and Closeburn, to Dalswinton, where, in the woods, deadly strokes were dealt, and continuing the chase, passed near Lochar Moss and Lochmaben, to a place in the neighbourhood of Cockpool, where was fierce fighting. Some of the English were drowned, some slain upon the sand; who escaped in England fled away.

Wallace, after resting a night at Caerlaverock, blithely journeyed next morning to Dumfries, where he received the people

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to his peace, ordered reward to true Scots, and granted remission to such as were in fault.

> "The Sotheroun fled off Scotland on ilk sid
> Be sey and land without langer abaid,
> Off Castellys, towyns, than Wallace chyftanys maid
> Rewlyt the land, and put it to the rest
> With trew keparys; the quhilk be traistyt best."

ENGLISH OCCUPATION RESUMED.

Again, in 1298, a great army, led by the King in person, entered Scotland, and meeting the Scots, under Wallace, defeated them, 22nd July, near Falkirk. A few months later occupation of the Castle of Dumfries had been resumed by the English, and Edward continued in possession for the next seven years, when Bruce effected its capture.

On the re-occupation, Sir Robert de Clifford had charge, and the Castle, no longer grouped with those of Galloway, was frequently associated with the Castle of Lochmaben.

In the order of the war, the King usually entered into indentures or written agreements by which his officers should provide certain men-at-arms and others, and serve with them in a specified capacity, in return for wages and stated quantities of provisions for their support. In regard to the horses of the men-at-arms the animals were valued by a jury of twelve experts, and in case of being lost in the service of the King, the ascertained price was allowed by him to the owner. In the rolls many hundreds of horses are described in some such form as the following short extract:—"Sir Robert de Clifford has a white dappled charger, value 45 marks; Sir Symond de Clifford, his knight, a dun horse with a star on the forehead, £20; Sir Roger de Kirkpatrick, his knight, has a brown bay horse, value £10." These were powerful animals, which in action were covered with mail armour; they contributed to the display so much prized in mediæval warfare, but proved less serviceable than usual on broken ground common in Scotland. On this account and the scarcity consequent on the drain through the war, small light unarmoured horses were introduced from Ireland; the horse was called a hobby, the rider a hobbler. Some of the duties of the hobbler were scouting and spying. Thus Sir Robert de Clifford, warden of Lochmaben Castle and the valley of Annan, requests Master Richard de

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Abyndon "to pay either in money or victuals, the wages of Richard de Bret, an Irish hobbler retained to spy the passings and haunts of the enemy by night and by day, who has been on duty for 6 weeks and 3 days; lest he take himself off for want of sustenance." Galloway also contributed light horses.

In an agreement or indenture of 20th November, 1298, the King gave minute directions in respect to the garrison and munitions of the Castle. "Be it remembered," he says, "that the King has appointed that in the Castle of Dumfries there should remain twelve men with armed horses, who shall have among them all twenty-four foot soldiers by the appointment of Sir Robert de Clifford. Also the twenty crossbow-men who were at Berwick, who were appointed to the said Sir Robert de Clifford at Durham, and the six crossbow-men whom the said Sir Robert de Clifford shall place there, whom he took from the Castle of Lochmaben, and 4 foot-men of his own, whom he also shall provide. Also a master engineer and 4 carpenters. Also one smith and his lad; one Engineer and 2 masons, whereof the amount shall be 76 persons.

"For whose support the provisions underwritten are appointed from 20th November next coming, at the beginning of the 27th year of the reign of our Lord the King aforesaid, until the last day of the month of June (the first day and the last being reckoned) for 223 days, that is to say for 32 weeks:—by the day 3 bushels of wheat, 120 Quarters of wheat, of wine 10 tuns, of Malt or Barley to make malt for beer, 160 Quarters, of beans and peas, 20 Quarters, of oats for provender for the horses, 100 Quarters, of oxen 50 carcases, of herrings 10,000, of dried fish 500, of salt 20 Quarters, of iron and steel as much as will be necessary, of cords and hides for engines. . . . of money 10 marks, which shall be delivered to the Constable of the Castle for small necessaries. And be it remembered that Mr Richard de Abingdon (to whom the King by his letters has given directions regarding these things) shall see that all these things above written, shall arrive by land in the company of the said Sir Robert, or by sea, at the said Castle as he more fully is directed in the aforesaid letters of the King. Also the said Sir Robert shall place in the Castle 2 engines, 2 springalds, 2 Crossbows with winches, and 2 Crossbows of 2 feet. Also the Bishop of Carlisle,

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one Crossbow with a winch, 2 Crossbows of 2 feet and as many quarrels as possible."

In the beginning of the year 1300 Sir Robert de Clifford was transferred to the Company of Sir John de St. John, the Captain and Lieutenant of the Marches, at Lochmaben, and Sir John de la Doline, an expert in the manufacture of war engines, who in the autumn of 1299 had been engaged at Carlisle in directing the making of the engines Berfray, Maltone, and Cat, and others, succeeded him in the Wardenship of the Castle of Dumfries. These are the terms of his investment. "The King to all whom, etc., health, know that we have granted to our beloved and faithful John de la Doline, our Castle of Dumfries with its pertinances, to guard so long as it pleases us. To whose, etc. Witness the King at Westminster, the 24th day of March, 1300. By the King himself, J. de Benstede announcing it."

THE AFFAIRS OF THE CASTLE IN THE YEAR 1300.

The 28th year is notable in the affairs of the Castle. It became the base for forays by the English against the Scots of Galloway, and for the siege of Carlaverock; and in the autumn extensive structural works, designed to strengthen the fortress, were initiated by the King, who manifested particular and personal interest in the operations, remaining ten days at Dumfries at the end of October supervising and hastening their completion.

We have for this year also a special source of information, the Wardrobe Account, already mentioned. It sets out in minute detail the wages of the men-at-arms and others dwelling in the fortification of the Castle, and within the fortification of the Peel after its construction. From it we become acquainted with the names of the chief officers, the description and computed value of horses of the men-at-arms, and the description and price of most of the articles provided for the support of the garrison; also the wages of the workers employed in strengthening the Castle and raising the Peel, and generally the entries are illustrative of many of the conditions of warfare and of labour existing six hundred years ago.

THE KING'S MOVEMENTS ABOUT DUMFRIES.

The accounts disclose many of the King's movements at Dumfries and the neighbourhood. The Minor Friars of Dum-

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fries were paid 6 shillings for the King's support for three days on his arrival there in the month of June, by the hands of Lord Henry, the almoner. On 10th July the King made an oblation of 7 shillings at the great altar of the church of the Minor Friars of Dumfries. On the 12th he made a similar offering in his own chapel at Carlaverock, in honour of St. Thomas; on the 14th he remained at Carlaverock. (These two dates, the 12th and 14th July probably coincide with the siege of Carlaverock). On the 16th the King made another offering in the church of the Minor Friars at Dumfries. On the 24th October the King made his oblation of 7 shillings in his own chapel at Dumfries, for the good report which he heard from the parts of Galloway. At the same place on the 28th, being the feast of the apostles Simeon and Jude, he made his oblation of 7 shillings in the church of the Minor Friars. On 1st November, the feast of all saints' mass was celebrated in the presence of the King and of Lord Edward the King's son, in the church of the Minor Friars of Dumfries, when he made his usual offering of 6 shillings. On the same day the Minor Friars were paid 5 shillings and 4 pence for the King's board for 4 days of his stay there in the month of October, by the hands of William of Annan. And on 3rd November the King made his usual offering in his own chapel at Caerlaverock. Other places in the neighbourhood were honoured by the King's presence, as Applegarth, Tinwald, Lochrutton, (Lochroiton), Kirkcudbright, Twynholm, and Girthon.

The Queen and the Court arrived at Dumfries on the 17th October, and remained until the end of the month. They journeyed in the company of a squadron of foot soldiers, leaving Carlisle on Saturday, 15th October, on which day sight of Dumfries was first seen, and arrived as before stated on the 17th.

THE COMPANY DWELLING IN THE CASTLE.

A treaty having been concluded between England and France, without reference to the Scots, Edward resolved to prosecute his grand purpose, the conquest of the Kingdom of Scotland. He entered Scotland at the head of a numerous and well appointed army, consisting of the flower of the English nobility, and led by the most experienced generals of the age. Consequently, the dwellers in the Castle were numerous and illustrious. Some of them had come prior to, and were present at, the seige

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of Caerlaverock. Others arrived after the operations were completed—notables, many of them, whose stories adorn the meterical narrative of that celebrated siege.

Sir John de St. John, who at this time was Warden of the Marches about Dumfries, and who as the oldest and most experienced of Edward's officers, was entrusted with the guidance and care of the Prince of Wales, nominal commander of the fourth squadron of the besieging army, elicits the commendation of the poet.

"The brave John de St. John
Was everywhere with him (the Prince),
Who on all his white caparisons
Had upon a red chief two gold mulletts.
. . . . . .
The St. John, the Latimer,
Were associated to him the first
Who were to array his squadron,
As those who best understood that;
For it would not be wise to seek elsewhere
Two more valiant or two more excellent men."

And of Sir Robert de Clifford, who was much in evidence about the Castle of Dumfries, the poet says:—

"Robert the lord of Clifford,
To whom reason gives consolation
To overcome his enemies,
Every time he calls to memory
The fame of his noble lineage.
He calls Scotland to bear witness,
That he begins well and nobly,
As one who is of the race
Of the noble Earl Marshal,
Who beyond Constantinople
Fought with the unicorn,
And struck him dead beneath him.
From him he is descended through his mother.
The good Roger, his father's father,
Was considered equal to him;
But he had no merit which does not appear
To be revived in his grandson;
Wherefore I well know that I have given him no
Praise of which he is not worthy.
For he exhibits as good proofs
Of wisdom and prudence as any I see.
The King his good lord knows

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His much honoured banner,
Chequered with gold and azue,
With a vermilion fess.
If I were a young maiden,
I would give him my heart and person,
So great is his fame." *

Sir Richard Siward, one of the most celebrated men of his day, who more than once held the custody of the Castle of Dumfries, had a career characteristic of the age. A Scotsman, and from an early age, a man of influence. For some reason he was made prisoner by Henry III. of England in 1236, and suspicion arose that the capture was procured by Siward himself, and followed by an agreement between the King of England and him inconsistent with the fealty due to his sovereign Alexander III. King of Scots. Henry addressed Alexander intimating to him that Siward did not do so, that the King only caused him to be seized to secure the peace of the Kingdom; and neither before nor after nor at any other time did Siward make any agreement with the King against his fealty to Alexander. We have seen that Sir Richard Siward held the Castle of Dumfries for the English King in 1292, and had the honour of handing it over to King John, on his accession to the throne of Scotland. In 1294-95 Sir Richard was still in Edward's service, but so far, it does not appear that he had been active against his countrymen the Scots. Before the end of 1295 Sir Richard had returned to Scotland, and seems shortly afterwards to have taken service under the Government of King John. He and his son Richard, being arrayed with the Scots, were captured by the English at the battle of Dunbar, 16th May, 1296. Sir Richard was imprisoned in the Tower of London, and his son was put in fetters and lodged in Bristol Castle. After enduring imprisonment for a year Siward was liberated, and had his forfeited lands restored to him on condition of serving Edward beyond the seas and elsewhere. Deprived of his lands and means of livelihood, and in prison, it might be for life; his son Richard fettered and in prison; his son John also in prison, a hostage; and English friends, who had become sureties for him, liable to claims on his account, there seemed no way of escape from the entanglements cast around him other than surrender. In such ways as this did the

* Wright's Roll of Karlaverock.

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astute Edward entrap into his service many loyal Scots. Passing to the Continent, Sir Richard gained the King's commendation, who commanded the Constable of Bristol Castle to free Richard Siward, junior, of his fetters, give him a chamber with a privy chamber, and deal leniently with him on account of the good services of Sir Richard, his father in Flanders. Sir Richard returned to Scotland, was present at the battle of Falkirk, where he had for his own riding a horse gifted to him by the English King. He again became Edward's Warden of Nithsdale, and owner of Tibbers Castle, which he repaired or rebuilt, the King ordering payment of £100 due to him so as the work should not be hindered. Sir Richard held from time to time many high offices, and since his imprisonment he remained during a long and arduous life faithful to Edward and his son. He was Sheriff of Dumfries and Warden of the Castle when it was wrested from the English by Bruce. His name appears in the Roll of Carlaverock. He had "a black banner painted with a white cross, flowered at the ends." Later we find Sir Richard's son John adhering to the Scots.

The names of officers, with a variety of detail more or less interesting, are revealed in the wages account:—"To Sir James de Dalelegh (the king's receiver) agreed for wages of horsemen and footmen dwelling within the fortifications of the castles of Dumfries and Lochmaben, to be paid for the wages of Sir Roger Kirkpatrick, made constable of the Castle of Lochmaben by Sir John de St. John, captain of the march of Cumberland, and of the vale of Annan, . . . for the wages of Sirs Humphrey de Bosco, Hugh Mauleverer, Thomas de Torthorwald, Humphrey de Garding, and William de Heriz, Knights, their twelve esquires, and 3 valets, with covered horses, dwelling within the same fortifications from the 8th day of July until the 19th day of November at the end of the present year. . . . For the wages of banerets, knights, and esquires below written, sent by the king for Caerlaverock in the company of the said Sir John, to dwell in the aforesaid fortifications, both for the protection of the same parts, and for an expedition to be made upon the Scots, after the return of the King with his army from the parts of Galloway, between the 30th day of August and the 19th day of November, namely, for the wages of Sir Richard Siward, baneret, of 2 knights and their 7 esquires, from the said 30th day of August

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until the 7th day of November. . . . And for the wages of Sir Arnold William de Pugyes, and his 4 esquires, from the 2nd day of September until the day on which he was at the King's table within the castle of Dumfries as constable of the said castle, until the said 19th day of November. For the wages of John de Cruce and his 4 comrades, esquires, with covered horses, dwelling within the fortification of the Castle of Dumfries, from the 19th day of October until the day on which they were at the king's table within the same fortification, until the 6th day of November. . . . For the wages of Godfrey de Massenby and 28 esquires, his comrades, with covered horses, assigned to dwell within the fortification of the Peel of Dumfries after the construction of the same Peel, from the 2nd of November, on which day the King retired from the same parts towards Carlisle, until the 5th day of the same month. For the wages of one priest for conducting worship, one ordinary priest, one gatekeeper, one watchman, 4 engineers, 5 workmen, one smith, and various foot soldiers, both artillerymen and archers, dwelling within the fortifications of the same Castle, between the 26th day of August and the 19th day of November."

"To Sir William de Felton for his own wages, and those of 3 esquires, from the 17th day of September, until the 3rd day of November, on which day the King retired to Carlisle from the parts of Dumfries, after the proclamation of the truce entered into with the Scots."

The garrisons were constantly undergoing change according as circumstances might require, and the King's command.

By an indenture of 9th November between the King and Council, and Sir John de St. John, the latter was appointed captain, warden, and lieutenant of Galloway, the Castle and county of Dumfries, the Castle of Lochmaben, of the valley of the Annan, and the Marches towards Roxburgh, from this date until Pentecost next, with 40 men-at-arms for his retinue, and drawing for them and said ward 700 marks, and making no claim for replacement of horses during the truce with the Scots. Besides, continues the agreement, "there shall be within the Castles and Peels of Dumfries and Lochmaben, at the King's wages, 40 men-at-arms, 200 footmen, 50 of whom to be crossbow-men, and 150 archers. Each man-at-arms at the usual pay, each crossbow-man 3 pence, and each archer 2 pence; also a bowyer and a

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groom at 5 pence, a carpenter at 4 pence, and a watchman at 3 pence."

The men-at-arms in the King's pay, above spoken of, were Sir Montesin de Noilan, with 6 barbed horses, Sir Arnold William de Pugyes with 4 barbed horses, Sir Gallard de Brignak with 2 barbed horses, William de Sowe with 4 barbed horses, and Bernard de Bignoles with 4 barbed horses. The king reserved to himself to increase or lessen the number of men-at-arms and foot at pleasure. Of the horsemen, knights had a wage of 2 shillings a day, and esquires were paid one shilling a day.

DUMFRIES A RENDEZVOUS.

Dumfries was a rendezvous for soldiers journeying to serve in Galloway, Cumnock, and as far as Ayr. When the Queen and the Court joined the King at Dumfries on 17th October, they had come escorted by a squadron of soldiers, mostly foot, about 1000 strong. Leaving Carlisle on the Saturday, 15th October, they came in sight of Dumfries the same day, and arrived at their destination on the 17th. Other squadrons followed, each covering the journey in 2 days. The barons contributed their quota of men. John de Derle, servant of Lord Ingleram de Gynes, led 40 footmen archers, of the men of the same lord, 9 foot soldiers of Lord Thomas de Pykering, 8 foot soldiers of the men of the Friars of Leyburn, 10 foot soldiers of the men of lord Michael de Hertecla, and 8 foot soldiers of the men of lord Robert de Askeby.

Thomas de Preston valet of Sir Gilbert de Corewenne led the men of the same lord, of Sir Robert de Bruyn, and of Sir William Dacore. There were men of the baron of Greystok, of Sir Hugh de Molton, Sir Robert de Tyllol, men of Kendal, men of Sir Robert de Clifford, of the Earl of Lancaster, of the Bishop of Durham, men of Sir Thomas de Derwentwater, Sir Alexander de Bastelthweyt, Sir Thomas de Lucy, Sir Thomas de Ireby, and others.

The quota of the powerful and astute churchman, the Bishop of Durham, numbered at least 120 men. His character as portrayed in the Roll of Karlaverock is too interesting to be omitted:

> "Both in company and affection,
> With them were joined the followers
> Of the noble Bishop of Durham,

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The most worthy clerk in the kingdom;
And indeed of Christendom,
If I should tell you the truth of him.
Because if you will listen to me,
He was wise, and eloquent,
Temperate, just, and chaste.
Never did you approach a rich man
Who regulated his life better.
Pride, coveteousness, and envy,
He had entirely cast away;
Nevertheless he had a lofty heart
To defend his rights,
So that he failed not to overcome
His enemies by patience.
For by a just conscience
So strongly was he influenced,
That everyone wondered.
In all the King's wars
He had appeared in noble array,
With a great retinue, and at great cost.
In consequence of I know not what wrong,
For which a process was entered,
He was detained in England,
So that he did not then come to Scotland;
Notwithstanding he so well kept in mind
The King's expedition,
That he sent him of his people
One hundred and sixty men-at-arms.
Arthur never with all his spells,
Had so fine a present from Merlin.
And he sent there his ensign, which was gules
With a fer de moulin of ermine."

VICTUALLING THE CASTLE.

The victualling of the Castle was frequently a matter of difficulty, and want, if not famine, was a not uncommon experience. The neighbouring country, by reason of the war, being waste, it was necessary to obtain supplies from England, Ireland, and elsewhere. Copious, and as usual, minutely detailed accounts, are to hand of such munitions, showing of what they consist, where got, how transported, and the prices paid, severally.

The fare seems to have been substantial and generous, but without luxury. Cows and their produce, oxen, sheep, pork, poultry, and fish are staple supplies. The fish is various, as great fish, herrings, in great numbers, and hard fish called hakes.

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Of grain in various forms, oats, dried oats, wheat, wheat meal, and wheat flour, barley, and malt, were in use; also beans and peas; salt was brought from the salt pits of Skimburness. The drink bills would alarm the temperance men of the present day. Wine and beer of various qualities were in demand.

Carlisle was the chief centre for the supply of the castles and army of the district. The stores were in charge of the Receiver and Distributor of the King's victuals between whom and the constables of the castles and others a system of accounting was in operation. That it was strict we at once discover. Sir John de la Doline constable of Dumfries having omitted a few trifles in his account required to make good their value, for which the following receipt was granted to him by the Receiver:—

"Received from Sir John de la Doline, constable of the castle of Dumfries, for a half quarter of one ox, one quarter of a sheep, 2 bushels of oats, 9 hides of oxen and cows, 14 skins of sheep, and proceeds of same, which remained in arrears upon his account of the present 28th year, 15s 1d. From the same for 2 carts and 6 horses delivered to him by Master Richard de Abingdon for seeking victuals as far as the castle of Dumfries, of which he makes no mention in his account of the present year, 40s. Total, £2 15s 1d."

With reference to the above 2 carts and 6 horses, and others, the receiver makes the following precise entry:—

"Master Richard de Abington receiver of the King's victuals at Carlisle, renders account of 9 carts and 31 horses remaining at the end of his account for the year 27, as is evident upon the third folio preceding. Total 9 carts and 31 horses, of which he computes delivered to Sir John de la Doline, constable of the Castle of Dumfries, for carrying victuals and other necessaries to the same place, for the munition of the same Castle, 2 carts, 6 horses; and he computes delivered to Sir James de Dalilegh staying—to receive the victuals in the same place after the departure of the said Richard, 2 carts, 5 horses; and by deaths by old age and hard labour 8 horses; and by the sale with which the keeper is charged in the receipt of the present year 3 carts, 5 horses, total 9 carts and 31 horses, and so the account is balanced."

The supplies were carried both by water and by land. Various vessels were engaged, and some, probably owing to the river, did not reach further than Caerlaverock,

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as we learn from the following account:—"To Richard de Geyton, master of the ship which is called the Nicholas of Geyton, taking in his same ship 20 carcases of oxen as far as Caerlaverock, for the supply of the men dwelling in the fortification of the castle of Dumfries, for his own wages and those of 5 sailors his comrades in the same ship, for 8 days, 14 shillings." A sailor of the name of John le Skyrmysure with his "galie" also was specially retained to carry victuals for the Castle of Dumfries. In a case of carriage by land, of 2 carts and 6 horses, destined for Lochmaben Castle and a like number for the Castle of Dumfries, those for Lochmaben were captured by the Scots at the passage of the Solway, while the Dumfries portion escaped and reached their destination.

The following extracts and others illustrate the victualling of the Castle:—

"To Sir John de la Doline constable of the Castle of Dumfries for money paid by him for 9 oxen and cows, 14 sheep, 70 quarters of oats, 70 large flagons of wine, bread, beer, fish, poultry, and various sorts of other small necessaries, bought by the same, for his own expenses and those of certain men-at-arms and others dwelling in his company in the fortifications of the aforesaid Castle, from the 7th day of March in the present 28th year, until the 30th day of July in the same year."

"To Master Richard de Abingdon, receiver, and distributor of the King's victuals, coming to Carlisle and Skimburness, from divers parts of England and Wales, and from parts of Ireland, etc., in connection with victuals for the Castles. . . . From which account delivered to Robert de Felton, constable of the Castle of Lochmaben, for the support of the munition of the same Castle, 65 quarters of oats, 30 casks of flour, 6 quarters of dried oats, 20 carcases of oxen, 4 quarters and a half bushel of salt in one cask, and 3 bars of iron; and to Sir John de la Doline, constable of the Castle of Dumfries, for the munition of the same Castle, 2 casks of flour, 2 casks of wine, and to the same for making engines for the castle of Caerlaverock, 29 bars, and 10 pieces of iron; and to Sir Robert de Cantilupe for the munition of the said Castle of Lochmaben in the time in which he was constable of the same, one quarter of oats and 5 casks of wine; and to Sir Arnold William de Podio, constable of the Castle of Dumfries, for the munition of the same Castle, 7 casks of flour

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and 8 casks of wine, 30 fat hogs, 6 quarters of dried oats, 9500 herrings, 18 quarters of oats, and 4 quarters and a half bushel of salt."

"To Sir James de Dalilegh, clerk, for divers outlays and expenses incurred by the same about the victuals bought by himself and also the victuals sent to the parts of Carlisle by the care of divers persons, namely, for the carriage of divers victuals from the salt pits of Skimburness to Carlisle, and the Abbey of Holm, by water in vessels, and by land by horses and wagons, from the same places to Lochmaben and Dumfries, for the munition of the castles there, for the portage, loading, and discharge of the same vicutals through divers places, for the cleaning and repairing of the houses in which the same victuals were deposited, for the pay of coopers binding casks of flour and wine, the wages of clerks and others receiving the same victuals, guarding, delivering, throwing, turning, and measuring them, under the same Sir James, between the 5th day of June and the 19th day of November in the present year ending, together with the wages of the same Sir James, within the said time, and for hemp, tanned hides, ropes, clamps, nails, and other binders, bought by the same for the aforesaid castles, within the same time, £175 5s 2½d."

A RE-SALE.

When a change of constables took place at the Castle there was a stock-taking and accounting, between the out-going and in-coming officers, and this principle was also carried into larger transactions, as in the case of the stores at Carlisle. Master Richard de Abingdon having been succeeded there by Sir James de Dalilegh as Receiver and Distributor of the King's victuals, the question seems to have arisen how best to arrange the transfer. To take stock and make up a valuation would be laborious and tedious, and as some of the stores had been long kept their value could not be estimated with certainty. While not stated in so many words, it is to be inferred from what took place that the conclusion reached was to carry out a process similar to that now known as a re-sale, by which to dispose of the entire stock, so as the in-coming Receiver should be able to commence his accounts on a clean slate. The sale took place, the castles and the army in the vicinity were the chief purchasers, and the sum realised amounted to £800 of the money of the day. 921 quarters 7

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bushels wheat, flour, and wheatmeal, were sold to the horse and foot soldiers in the fortifications of Lochmaben and Dumfries, and to divers men of Carlisle; 852 quarters 2 bushels of wheat flour and meal went to Peter of Chichester, clerk of the king's pantry and buttery, by the hands of Walter Waldechef, the king's baker. The Bishop of Carlisle bought certain quantities for the supply of the castle of Carlisle, for the earls, barons, knights, squires, and divers others dwelling in the King's army. Sales were made to various persons for the fortifications of the castles in the same parts, and to the knights, esquires, and others living in these fortifications and in the king's army. Flour was also supplied to divers bakers of the city of Carlisle for baking against the arrival of the King from the parts of Galloway, etc.

Prices ruled as follows:—Wheat, 10s a quarter, 8s, 6s 8d, and 5s, according to quality; poor wheat flour and meal, 4s a quarter; beans and peas, 4s 6d a quarter; oats, 4s a quarter; poor oats, 1s 6d, and half oats 3s a quarter; dried oats, 5s, 4s, and 3s 4d a quarter. The charge for baking was at the rate of 6s 8d for every quarter of flour used. Fat hogs brought 5s and 4s 6d each. Untrained horses, part of a number coming from Galloway, were in stock; and 900 horse shoes at 10s a hundred, and 2000 nails at 20d a 1000, were disposed of to Walter de Bello Campo, seneschal of the King's household. 24 casks 26 sects of wine at 4 marks a cask went to divers magnets and others living in the King's army; 20 casks of beer were sold to various persons connected with the fortifications of the district, at various prices, as 10s, 8s, 7s 6d, and one mark a cask. Beer of a higher quality was sold to Sir Robert de Clifford and Sir William de Rithre, at the price of 30s a cask.

ARTILLERY.

"The crakkis of war," which Barbour speaks of as marvellous, had not come into use, but of contrivances designed to assail and defend fortified strongholds, there were many, most of them bearing a family likeness to the military engines of the Romans; ballistæ, springalds, great crossbows with wenches, those named meltone, berfrey, and cat, and others. A berfrey was sent from Lochmaben for the siege of Caerlaverock; so huge and cumbrous was it that the labour of transport involved the employment of 5 carts for 7 days, and 2 carts for 4 days, a road having been pre-

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viously made on which the carts might travel. The berfrey is a wooden tower, moving on wheels, which when run up to or near the wall of the invested town or castle, enables the assailants to overlook and command the interior of the place assailed. The design is as old as the time of Augustus Cæsar, when Vitruvius, who had charge of the engines of war, formulated rules for its construction, up to a height of eleven storeys and 200 feet.

That such equipment of the Castle of Dumfries was not overlooked is made evident from the following and other accounts:—

"To lord Henry de Sandwich, chaplain of lord John de Drokensford, for money disbursed by him for 41 engines, 800 quarrels, 3 bandries, 2 pounds of varnish, 4 pounds of feathers with verdigris, 200 pounds of string, 6 pounds of glue, hemp for making cords and baskets, and ropes for packing the same, bought by the said lord John, and sent to Dumfries and Lochmaben for the fortifications of the Castles of those places, in the month of October, together with the pay of 3 carts carrying the same to Dumfries, in the same month, and for the wages of Robert de Ra, artilleryman, going with the same things for 8 days, as is evident by the account of the said lord Henry, £6 6s 3d."

FRENCH AMBASSADORS AT ANNAN.

The accounts contain numerous miscellaneous charges connected with the Castle of Dumfries, such as, for restoring horses of the officers and men-at-arms, for messengers carrying messages, verbal and written, from and to the King at Dumfries; for travelling to obtain money and bring it to the King at Dumfries. Ambassadors from the King of France followed Edward into Scotland, and negotiated a truce between the King and the Scots, and in the end of October Randolph de Manton, the cofferer of the King's Wardrobe, was sent by the King from Dumfries to Carlisle to make a present to the Ambassadors of the King of France on the part of the King himself. The cofferer's expenses for 5 days, together with the expenses of the Ambassadors at Annan, amounted to £2 10s.

The lord treasurer of England, the bishop of Coventry, and Lichfield, attended personally at Dumfries, Lochmaben, and Caerlaverock, in the month of November for the purpose of settling accounts for the fortifications of these castles.

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THE REINFORCEMENT OF THE CASTLE.

The King sent the following message to Berwick:—"Henry de Empsingham and John de Karleton, clerks, shall say to Richard de Bramesgrave this message, which the same Richard shall tell, as from the King, to Robert Hastings and his brother, and the other men-at-arms who are in their company at Roxburgh and Jedburgh. And shall also tell the same message to Sir William Latimer and the rest of the garrison at Berwick, namely, that our lord the king has gone to Dumfries to raise his peel and reinforce the Castle. And his son has gone with him, and many other good men-at-arms," etc.

The work of raising the peel and reinforcing the Castle was begun on 5th September, and carried on with diligence, so that by the 2nd of November, when the King left Dumfries for Carlisle, men-at-arms were, as we have seen, dwelling within the fortification of the peel. Its final completion, however, was not accomplished until the 23rd of the month. Of craftsmen employed, there were carpenters, sawyers, smiths, masons, and quarrymen; also ditchers in great numbers. Clerks were assigned the duty of paying the wages of the workmen, and keeping the accounts. Godfrey de Wyndsore had charge of the expenditure for carpenters, and Henry de Brandeston paid the wages of the ditchers. Friar Robert de Ulm was the master carpenter, receiving 9d per day, his lad Alan being paid 4d. Ade de Glasham, the chief foreman, and the other foremen, had a wage of 6d, and other carpenters and sawyers had 4d; carpenters' labourers, pages they are called, received a wage of 2d a day. The ditchers had over them Ade de St. Edmonds, master ditcher, receiving 6d per day, and a number of foremen receiving 4d; the other ditchers were paid 2d a day, and women helpers had a wage of 1½d per day. The workmen were brought chiefly from Northumberland and Cumberland, but a number of the ditchers came from parts of Lochmaben. How many hours constituted the working day is not stated, but probably it extended from sunrise to sunset; the toil went on all the seven days of the week.

The ditchers employed numbered sometimes as many as 250, but the time occupied in accomplishing their task did not much exceed a fortnight. The peel was constructed chiefly of timber, and carpentry predominated over all the other sections of the work. As many as 114 men of this craft were engaged on the

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work, at one time, and the average numbered about 80. The timber was got at the forest of Inglewood in Cumberland, and the peel which was to be placed around the Castle of Dumfries was chiefly worked and made there. Trees were also cut in a wood near Dumfries, for pales. An axe, which was borrowed for the purpose, not being returned to the owner, he was compensated with a payment of 10d. Other 4 axes used for cutting trees in the same wood cost 1s 1d each. A considerable amount of smith's work was performed at Inglewood, and it is evident that a fabric was in course of construction in the forest. Thomas de Turney was the chief smith, receiving a wage of 6d per day, and he had 7 assistants, some receiving 5d and others 4d a day; and 4100 nails and 62 bolts were bought at Carlisle and elsewhere for smith's work. Master Edward de Appleby was the chief mason. His comrades varied in number up to 15. The work of this craft consisted, partly at least, in repairing stone buildings within the "King's Castle of Dumfries."

That Edward regarded this matter of great importance and urgency is evident. On 17th September he supervised the operations, when he distributed among the workers a gratuity of £2 in addition to their wages. On the 27th the Queen made a similar distribution. Later the carpenters and ditchers had 4 casks of beer for their encouragement. Master Edward de Appleby and his lad had a gratuity of 5 shillings in October. On the 30th of the same month £1 5s 7d was distributed among the ditchers. And in the middle of November £1 3s 4d was by order of the King distributed on two occasions at Dumfries to the carpenters.

We have the King's own estimate of the value in which he held such strongholds as the Castle of Dumfries. Writing to the lord treasurer of England, he says:—"And to our affairs of Scotland be also attentive in such manner that our interests may prosper there, and that the wages be well and promptly paid to our people who remain in those parts; and that you cause the Castles of Scotland to be well surveyed, and the fortresses and the other places which concern us there, and that they may be well stored, so that there be no want, and that the new castles which we are causing to be made there, have all they shall require for the completion of the works. For if they be well stored everywhere, this will be a great security to the whole of our affairs in those parts."

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The accounts for the wages of the workers employed in strengthening the castle are too lengthy to be here presented in whole, but a few items, we think, may prove acceptable as indications of their character. We will first take Godfrey de Wyndsore's accounts:—"To Godfrey de Wyndsore, Clerk, assigned for paying the wages of the carpenters, masons, smiths, and other workmen retained to the king's wages for the making and working of the peel of Dumfries, for his own wages and those of 3 foremen and 35 other carpenters and 4 pages, from the 5th day of September until the 11th day of the same month, both being reckoned, for 7 days, to the aforesaid Godfrey and the foremen to each 6d a day, to each carpenter 4d a day, and to each page 2d a day, £5 0s 4d. To the same for the wages of one foreman carpenter and of 14 other carpenters, from the 6th day of September until the 11th day of the same month, both being reckoned, for 6 days, to each foreman and carpenter as before, £1 11s 0d. To the same for the wages of one foreman carpenter and 18 other carpenters for 5 days, and two carpenters for 3 days, and 2 sawyers, to each 4d a day for 2 days, the said 11th day of September being reckoned the last, £1 15s 10d. To the same for his own wages, those of the foremen Ade de Glasham, and the foremen his comrades and of 74 other carpenters, from the 12th day of September until the 18th day of the same month, both being reckoned, for 7 days, £9 13s 8d. To the same for the wages of four pages waiting on the same carpenters for the same time, 4s 8d. To the same for the wages of 5 carpenters for 2 days, the 17th September being reckoned as the first, 3s 4d. To the same for the wages of a lad of Friar Robert de Ulm, carpenter, receiving 4d a day, for the aforesaid 7 days, 2s 4d. Total, £18 11s 2d."

Passing to the smith's work, the account proceeds:—"To the same for the wages of Thomas de Turney, smith, receiving 6d a day, and of 7 smiths his comrades 2 of whom received each 5d a day, and 5 each 4d a day, being retained to the king's wages for the making of the aforesaid peel, from the 18th day of October until the 20th day of November, both being reckoned, for 34 days, £5 2s 0d.

"To the same Godfrey for 4100 nails of various forms, and 62 bolts, bought by the same both at Carlisle and la Rose, at various prices, for the operations of the same smiths in turn,

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together with baskets and cords for packing the same nails, from the aforesaid place to Dumfries, £4 18s 8d."

The mason's account runs:—"To Master Edward de Appleby, mason, for his own wages and those of 11 masons, his comrades, retained to the king's wages for repairing the houses within the king's castle of Dumfries, in the sojourn of the king at that place about the peel of the same, in the months of October and November, for 2 days, the 16th day of October being the last, to the aforesaid Master Edward 6d a day, and to each of the other masons 4d a day, 8s 4d. To the same for his own wages and those of 14 masons his comrades, from the 17th day of October until the 30th day of the same month, both being reckoned, for 14 days, to each as before per day, £3 12s 4d. To the same for the wages of one page of the same for 16 days between the 15th day of October and the said 30th day of the same month, both being reckoned, 2d a day, 2s 8d. To the same for his own wages and those of 15 masons, his comrades, for 3 days, the last day of October being reckoned as the first, 16s 6d. To the wages of one page for the same three days, 6d."

We now come to Henry de Brandeston's account for the wages of ditchers, but one to the sheriff of Northumberland may first be presented. "To Sir Roger Maynot, Sheriff of Northumberland, for money paid by himself for iron and wood bought by the king's command under his private seal, for making of them engines of war, for the vessels and boats, and sent to Carlisle for the operations of the Peel of Dumfries, in the beginning of the month of October, together with the wages of 200 ditchers and 5 smiths, coming from the same country to Dumfries, for the aforesaid operations in the same month, together with the expenses of the bailiff's collecting the said ditchers and hiring them in the same month, as is evident from particulars supplied by the same Sheriff to Sir John de Drokenford at Newcastle upon Tyne, on the 13th day of October, £17 19s 11d; and for the expenses of 12 quarrymen sent to the same place in the same month, for the said operations 10s 6d.—Total, £18 10s 5d."

"To Henry de Brandeston, clerk, assigned for paying the wages of ditchers, smiths, and other workmen coming from the County of Northumberland, for the making of the peel of Dumfries, for the wages of 200 ditchers from the aforesaid county, of whom 10 were foremen, for 4 days, the 17th day of October being

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reckoned as the first, to each foreman 4d a day, and each other ditcher 2d, £7 0s 0d. To the same for the wages of one master ditcher, receiving 6d a day, and 198 ditchers, 10 of whom were foremen, from the 21st day of October until the 30th day of the same month, both being reckoned, for 10 days, £17 11s 8d. To the same for the wages of Master Ade de St. Edmond, ditcher, receiving 6d a day, and 24 ditchers from the parts of Lochmaben, without a foreman, for 2 days, the 20th day of October being reckoned as the first, 9s. To the same for the wages of the said Master Ade, and 40 ditchers, one of whom was a foreman, from those parts, for 2 days, the 22 day of October being reckoned as the first, 14/8. Total, £25 15s 4d.

On 24th October 7 women were employed cleaning the ditch. 9 women worked 3 days, ending 27th October; 10 were employed on the 28th October; 14 on the 29th, and 25 on the 30th, for the same purpose. In regard to the transport of the timber from Inglewood forest to the Castle of Dumfries the information furnished by the accounts is meagre. That a considerable part was rafted up the river appears from the following entries:—"To Richard de Sabuts, sailor, of Dartmouth, for ropes bought by the same for collecting, tying, and drawing timber to the peel of Dumfries in the month of October, 3 shillings." "To Robert de Belton for money paid by himself to divers porters carrying timber from the water near Dumfries to the peel of the same place, 4 shillings and 3 pence."

Other lots were carried by the foot soldiers who journeyed as before narrated, from Carlisle to Dumfries in the month of October. 53 soldiers were so employed, 20 being led by Constable Adam de Ward, and 33 by Alan de Midhope, constable. These men, in addition to the soldiers' wage, were paid "of the king's gift and courtesy 2d per day for the labour which they sustained in carrying timber from Inglewood forest to the peel of Dumfries."

The parts carried by the foot soldiers of the peel, which had been worked and made at Inglewood forest, ready to be put in position, arrived at Dumfries on the 26th October. In an account to Sir Robert de Clifford it is noted that Sir Robert returned to the King at Carlisle on the 18th day of October, on which day, it is said, the same King hurried his march to Dum-

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fries to place the peel in position around the castle there. Probably the part transported by water had arrived before the 18th.

The expense connected with the strengthening of the castle and raising the peel of Dumfries, as contained in these accounts, amounts to over £200 of the money of the time, representing a present-day value of at least £4000, and the price of the timber falls to be added for the total value of the structure.

Edward had assigned a garrison to occupy the peel on the 2nd November. The earthworks not being quite finished, 76 ditchers were brought from Northumberland, for one day's work, and with their assistance the ditch was completed by the end of the day mentioned. The carpentry was brought to a close on the 23rd of the same month.

CHIEF FEATURES OF THE CASTLE.

While endeavouring to realise the chief features of the reinforced castle it is well to keep in view the circumstance that the use of timber in such structures as well as in house building, and generally, prevailed at this period in Scotland. The accounts are less helpful for the purpose than could be desired, for while excellent as records of expenditure, the entries allude to the nature of the works only in the most general terms.

One feature, and perhaps the most important in the case of a medæval castle before the introduction of firearms, the principle of which was to oppose a series of obstacles to an attacking force, is clearly enough indicated. The castle consisted of a double fortress, each division being independently fortified so that in case of attack if one were taken the siege had to be begun again under renewed difficulties. The divisions were also separately garrisoned. It will have been noticed that in the accounts mention is made of certain men-at-arms with covered horses dwelling within the Castle of Dumfries, and of others dwelling within the fortification of the peel of Dumfries after the construction of the same peel. The peel as a garrisoned area evidently corresponds with the mote, the castle being the bailey or lower court.

The outer fortifications consisted of a great ditch or dyke and earthen rampart, vestiges of which are yet, as already stated, exhibited in the grounds, and in the rear there was a stout palisading, which served the purpose of a wall. A draw-bridge,

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worked with great ropes, controlled the entrance, and within the fortifications there were certain buildings, partly at least, constructed of masonry. A chapel, dedicated to St. Mary, was ministered in by priests appointed for ministering to the garrisons, and there were stables and stores, and probably buildings for divers other purposes. So much we gather from the accounts. The nature of the peel worked at Inglewood forest is more difficult to realise. The palisading, or some of it, was probably constructed of the pales cut in the wood near Dumfries. What came from Inglewood was something more. It was worked and made and much smith's work was wrought for securing the parts. The words used seem to imply that it consisted of a number of framed structures, which might be placed, as stated, "around the castle," at intervals in the palisading, such, for instance, as turrets. This is the sort of combination which would best satisfy the terms used in reference to the peel of Dumfries.

LATER CONSTABLES AND GARRISON.

Having come to the end of the 28th year in which the circumstances of the castle have been illustrated in some detail, we propose now to proceed on more general lines.

Sir Arnold William de Podio followed Sir John de la Doline in the constableship, when a stock-taking and accounting as to the munitions in the castle took place. There were in garrison Sir Arnold, who had 4 barbed horses; James de Bruney and Ferreres de Bruck, with 2 barbed horses; 4 carpenters, a smith and his lad, a bowyer, a baker, a cook, a janitor, a chaplain, a clerk, 2 watchmen, a washerwoman, 4 labourers, 12 grooms of the men-at-arms, and 17 crossbowmen; total, 55.

For these 55 persons sustenance from 31 July till Martinmas was provided, consisting of wheat and flour, ground malt, wine and salt. For 104 nights of 6 barbed horses, 39 quarters of oats are allowed; to make 3 casks of beer 17 quarters of malt; 30 hogs are mentioned, 2900 herrings, and 150 hard fish called "hakes," also 20 carcases of oxen, 15 of beef, and 20 of mutton, etc.

The castle, however, does not seem to have been satisfactorily provisioned. The King, writing from Linlithgow, on 17th November, 1301, says, that having ordered John de St. John to have 120 men-at-arms constantly arrayed to make forays on the

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Scots of Galloway, till Easter next, and 10 men-at-arms and 100 foot to garrison Lochmaben, and a like number at Dumfries, commands them to seek a clerk without delay to see to their weekly pay, and also to the proper munition of these castles with dead stock, corn, and wine, and other "vivers," as he hears they are insufficiently provided; and on 13th December a sharp mandate is issued commanding money to be instantly sent to Sir John, who is in great want of it for these garrisons.

PROVISIONING AN ARMY.

On 21st November large orders were given for provisions from Ireland for the use of the Prince of Wales, and there were sent to the Castles of Dumfries and Lochmaben 1300 quarters wheat, 1300 quarters oats, 1300 quarters malt, 3000 quarters great fish, and 15,000 herrings; and on 5th December 200 casks of wine and 20 casks of honey.

With these preparations the King mustered at Berwick an army of 12,000 foot, and the Prince of Wales, now 16, had a separate command, whose forces marched by Dumfries into Galloway. This year's campaign, however, led to nothing, and a truce was arranged from January 26th, 1302, till St. Andrew's Day, that year.

Supplies were sometimes requisitioned and paid for according to valuations made by a jury of twelve. Thus, on January 4, 1303, James de Dalelegh, the King's receiver at Carlisle, bought and received from Richard Bouere, of Dundalk, in the port of Whitehaven, in the county of Cumberland, 64 casks of wine for the castles of Lochmaben and Dumfries, valued by 12 free men of the county in the merchant's presence, at 36s 8d each; total, £177 6s 8d.

In December, 1303, the garrison consisted of 2 banerets, 9 knights, and 71 esquires, 3 hoblers, 26 crossbowmen, and 100 archers.

Later there were 50 men-at-arms, 6 of them knights, 26 crossbowmen, 80 archers, 2 smiths, 2 porters, 2 carpenters, and 2 watchmen. Sir John de St. John had 2 bachelors and 12 esquires, Sir Richard Siward had his bachelors and 8 esquires, and Sir John de Botetourte, justiciar of Galloway, was warden.

On 13th April, 1304, £10 silver was spent for crossbows and quarrels for the king's use for the Castle of Dumfries, Sir

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Mathew de Redeman, being sheriff, and in the following year a warrant issued required that certain castles, including that of Dumfries, be provisioned, and their houses and walls repaired.

KING EDWARD'S WARS.

The truce of 1302 being ended, Edward prepared to renew the war. An army of 20,000 men, mostly cavalry, under Sir John de Segrave, advanced towards Edinburgh. The force suffered disastrous defeat at the hands of the Scots, led by Comyn, on 24th February, 1303; but in the following year another great army, led by the King in person, overran the country without opposition, when the Scots, exhausted, made submission; Wallace alone stood out.

About the middle of September, 1305, the King, believing that resistance was at an end, proceeded to the settlement of a plan of government for the conquered country. He appointed sheriffs to the several counties, and Sir Richard Siward, who was well acquainted with the district, again became Sheriff of Dumfries and Constable of the Castle.

CAPTURE OF THE CASTLE BY BRUCE.

All this time from the year 1298 the Castle continued to be held by the English, but a change was impending. The patriot Wallace was ruthlessly put to death on 23rd August, 1305; but within a few months thereafter Scotland was again in arms. On February 10th, 1306, Bruce killed Comyn in the church of the Friars Minors of Dumfries, and seizing, according to Hemingburgh, his (Comyn's) fine horse, he mounted, and his men mounted, and they rode to the castle and took it.

THE MINORITE FRIARY.

The Minorite Friary, which stood at the corner of Friars' Vennel and Castle Street, is said to have been founded by Devorgilla, King John's mother. Mention of the Friars Minors is made in the Exchequer accounts of the year 1265, and the monastery may have been built a little earlier or later.

Not many years ago a massive gable wall, containing a great fireplace, believed to belong to the kitchen, remained standing within a house on the north side of the Vennel at a point about 25 yards westwards of the Castle Street end, and behind

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the buildings there are still numbers of shallow burials, indicating the position of the garth. A few stones also have recently been recovered adjacent to the site, which have the characteristics of ecclesiastical work of the period. Of these the most interesting, perhaps, is a fragment of the sedilia which occupied the south wall of the chancel opposite the great altar, where Comyn was slain.

The Friary, founded about the middle of the 13th century, was yet comparatively new, and probably not more than 50 years had elapsed from its erection till the occurrence within its walls of the Comyn tragedy. It has been ascribed that the Friary was deserted after Comyn's slaughter, but that is incorrect, as the Exchequer accounts prove that King Robert Bruce paid the Friars annually in alms the large sum of £13 7s 8d, probably with the view of wiping out the crime committed before the altar of their church.

Bruce made no delay in the consummation of his high purpose:—

> **And syne to Scone in hy raid he,**
> **And wes maid King but langer let,**
> **And in the Kingis stole was set;**
> **As in that time was the maner.**

Edward was much exasperated, as well he might be, at this unexpected turn of events:—

> **And quhen to King Edweard wes tauld,**
> **How at the Brwyss, that wes sa bauld,**
> **Had brought the Cumyn till ending,**
> **And how he syne had maid him King,**
> **Owt off his wyt he went weill ner.**

The news reached Edward before 24th February, on which day, writing to Sir James de Dalelegh, he says, that having heard that Sir John Comyn and his uncle, Sir Ribert Comyn, are murdered by some people who are doing their utmost to trouble the peace and quiet of the realm of Scotland, he commands him to see to the peace and quiet of his lieges in his district, to the best of his power, and privately and advisedly warn them that they avoid all converse with the enemy in case of surprise or disgraceful damage. On the same 24th day Sir James and three

* See also Paper by Mr James Lennox in the Dumfries and Galloway Antiquarian Society Proceedings.

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esquires started for Scotland, as is evidenced by the following account:—

"To the same Sir James, for his own wages and those of his three esquires, riding into Scotland immediately after the death of Sir John Comyn, about the recapture of the Castles of Dumfries, Caerlaverock, Tibbers, and Durisdeer, and elsewhere in Scotland, by the order of our lord the king and of the lord bishop of Coventry and Lichfield, the Treasurer, and for collecting and receiving farms and dues in the aforesaid parts and elsewhere in Scotland, and for fortifying the aforesaid castles and for paying the wages both of the men-at-arms and foot soldiers dwelling within the aforesaid fortifications, and to others, from the 24th day of February in the present 34th year, until the 19th day of November, in the same year ending, for 269 days, each day being reckoned, himself receiving for himself and his esquires 5s a day, £67 5s." The terms of this account make it appear that Bruce had possessed himself of several other castles simultaneously, or nearly so, with that of Dumfries, after the slaughter of Comyn, a circumstance which seems to infer premeditation and preparation.

Bruce could hardly, without a large following, and some pre-arrangement, hope to take by storm the Castle of Dumfries, strengthened as it had been by Edward. It is said the justiciary court was sitting. He may have got access as of right, and without challenge, no breath of the deed done having reached the place, which was distant a mile from the church. To succeed in this way a race had to be run against rumour. Bruce seized the fleetest horse, and won the race. An incident in the capture was the taking of Edward's constable, Sir Richard Siward. He was imprisoned in his own castle of Tibbers, then held for Bruce by Sir John de Seton.

Edward had his revenge. The Castle of Dumfries was retaken by Gilbert M'Dowall and men of Galloway on the 3rd day of March, from the men of Robert de Bruce, who had held it for a space of three weeks. Tibbers also fell to the English, and Sir John de Seton was in turn made prisoner. He was indicted by Edward, "as taken in Richard Siward's castle of Tibbers, which he, John, was holding against the king, for Robert de Bruce a traitor, and for aiding the said Robert in killing John Comyn in the church of the Friars Minors of Dumfries, in contempt of God and most Holy Church, and against the king's peace, on Thurs-

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day next before Carneprevyum this year; and likewise on same day of the capture of the said Richard's person, then the king's sheriff of the county of Dumfries and constable of the castle, and at the capture of said castle, with said Robert." Sir John was sentenced to be drawn and hanged. The memory of Sir Christopher Seton, who met a similar fate at Edward's hands, has been kept alive at Dumfries by the vestiges of the "Crystol Chapel," on the site on which St. Mary's Church now stands.

These executions followed on orders by the King and Council that all present at the death of John Comyn, or of council or assent thereto, should be drawn and hanged.

Immediately on the recovery of the castle, the following were in garrison there:—Gilbert, son of Sir Dovenald, John de Gavelstone, Duugall de Gavelstone, Walter Duraunt, John Duraunt, William de Percy, William de la Mare, Richard de Colnehathe, John de Urre, John Arkarson, Patrick, son of Gilbert M'Loland, Ade de Eskdale, John de Harop, Ade de Kirkconnel, and Ade de Lochyan, esquires, with covered horses, and 40 archers, infantry. Their wages were reckoned from the 3rd day of March, on which day, as stated in the account, the said castle was retaken from the men of Robert de Bruce after the death of John Comyn. Sir Ade de Swyneburne, Knight, was appointed constable on 9th March, and entered on his duties 1st April. A little later, in May, Sir Thomas de Torthorwald, Sir Richard de Mareschal, Sir Henry de Maundeville, Sir Matthew de Egleles, Sir Matthew de Redeman, Knights, and Sir Henry de Percy, the king's lieutenant in Scotland, are mentioned, with their esquires, also artillerymen, light horsemen, foot archers, and others.

Sir Matthew de Redeman succeeded Sir Ade de Swyneburne in the constableship of the castle, on 2nd August.

The sum of £179 was, it appears by the accounts, paid as compensation for horses killed in the king's service at Dumfries and Lochmaben, from the year 1303. Sir John de Botetourte is stated to have received as compensation for 4 horses, priced for himself and his esquires, the sum of £76 and 1 mark. The executors of Sir John de St. John were paid as compensation for one horse priced for Terrie le Alemaunt, servant of the same Sir John, at Lochmaben, in the month of September in the 31st year, and which died in the king's service at Dumfries in the 32nd year, 8 marks.

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On the recapture of the castle a stocktaking of the munitions took place, as was usual when a change took place. Sir James de Dalelegh had an account "for the destruction of 9 casks of wine and 2 casks of honey by the lord Robert de Bruce from the stores in the Castle of Dumfries, at the time in which he took the said castle when lord Comyn had been killed." Another account, which, however, is imperfect, mentions 221 quarters salt, and 182 horse shoes, as part of the "loss and destruction through the lord Robert de Bruce in the time of the killing of lord John Comyn, in the castles of Ayr and Dumfries."

Much activity is now observable in bringing together great quantities of victuals, and otherwise. 2698 quarters of wheat, 77 jars of flour, 2484 quarters of oats, 491 quarters of ground oats, 480 casks of wine, and 16 pipes; 136 carcases of oxen and 2 spaulds, and 33 bacons, were got from Skimburness and Saltcoats, where the said victuals were received as far as Carlisle, the castle of Dumfries, and the Wellhouse and abbey of Holmcoltram; 58 quarters 7 bushels of wheat, 79 quarters 2 bushels of ground oats, and 28 casks of wine, and 7 barrels of wine hooped with iron, were forwarded from Carlisle to the castle of Dumfries, for the munition of the same castle, both by land and by water. Payments were made for the wages of various messengers carrying letters to our lord the king and other magnates of the council of the king himself, containing the state of the land of Scotland, and of the king's enemies, etc.; for money paid for one great rope bought for drawing the bridge of the castle of Dumfries, for hemp bought for cables, great ropes for the engines, and for making ropes for the tounges; for making of the same cables and ropes from the aforesaid hemp, and for the carriage of the same from Carlisle to Dumfries; and for feathers and grease bought for the quarrels and sent to the aforesaid castle of Dumfries, etc.

On 3 May, 1307, Sir James de Dalelegh or his clerks or lieutenants at Skimburness is commanded on the king's behalf, with the utmost haste to send from the king's stores, or buy corn for the purpose, to the castle of Dumfries, 20 casks of wine, 100 quarters of malt, or barley, to make malt, and in the quickest manner possible to have the whole ground at Dumfries, by day and night, so that the flour and the malt also may be ready when needed.

Dumfries had become a centre from which supplies were dis-

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tributed to the surrounding country as far as Carrick and Ayr, and victuals, and especially wine, were given out in considerable quantities from the stores. On 12th April the king's household in company of Sir John de Botetoute had 7 toneaux and a hooped barrel of wine, and about the same time a tonel was distributed to others; on 16th May the Knights, esquires, and sergeants, who were going to the foray, had 2 tons to divide among them; on the 17th 2 iron hooped barrels were distributed to Sir Henry de Percy; on the 18th Sir Ingram de Umfraville and Sir William de Felton received a tonel; and on 24th July Sir Ingram de Umfraville and Sir Alexander de Baliol were supplied at the instance of Amyer de Valence, with a tonel of the king's wine that they may better do the king's business on the enemy."

King Edward had on April 5th appointed Amyer de Valence, Earl of Pembroke and Henry de Percy his lieutenants and captains to put down the rebellion of Robert de Bruce, and Sir Robert de Clifford to assist the latter at Dumfries and elsewhere. On 24th May the king, writing to Amyer de Valence, says he is pleased to hear that the Earl was on the point of making an expedition against the enemy, and as to his request for money, he has ordered the Treasurer to advise with the chamberlain of Scotland and provide, "God Willing," what is necessary. He (the King) is sending Edward his son to Scotland with a strong force, and will himself follow as soon as possible. On 22nd May the Prince of Wales and numerous noble youths were knighted when a magnificent feast followed, at which two swans covered with nets of gold being set on the table by the minstrels, the king rose and made a solemn vow to God and the swans, that he would avenge the death of Comyn and punish the perfidy of the Scottish rebels. The Prince set out with a strong force for Scotland, and Edward himself followed, but being advanced in years and infirm he required to travel in a litter by slow journeys. He was detained at Lanercost by serious illness, but, disregarding his unfitness, proceeded to Carlisle, and after a slow and most painful journey ultimately reached the village of Burgh-upon-Sands within sight of Scotland resolute in purpose, but on the following morning, 7th July, he died in his 69th year and 35th of his reign.

Edward II., a weak and indolent Prince, found it incumbent that he should at least make some show of advancing the great scheme of conquest which his late father had so much at heart.

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Accordingly, about a month after his accession to the throne, the King set out with an army for Ayrshire. He passed through Dumfries, and journeyed as far as Cumnock, but at this point turning round he made his way back to England without having accomplished anything.

The Castle of Dumfries continued in the hands of the English. Robert de Clifford was keeper in 1309, thereafter Henry de Beaumont, and Dougal M'Dowall, of Galloway, followed in 1311. M'Dowall, it appears, was unpopular with the community about him, and in consequence of this state of matters he desired that the King should provide a residence for his family somewhere else. The King ordered accordingly. "For," the order runs, "the laudable service of his liege Dougal M'Dowall of Scotland, to his late father, and since his death to himself, whereby he has become hated by the enemy, and his wife and children need provision, gives them the manor of Temple-Couton in York, for their residence to the extent of £40.

M'Dowall seems to have stood well with the King, for he had a present of £212 9s 6d from the wardrobe in the year 1311, and later, in 1316, the King, for his loyal services, granted him an annuity of £20. It is no way surprising considering the vacillations of the time to find his son some time later adhering to the Scots.

MUNITIONING THE CASTLE IN M'DOWALL'S TIME.

22nd April, 1312.—The king commands Gilbert de Colvenue and Thomas de Lowther to pay the receiver at Carlisle 20 marks to victual the castle of Dumfries; and on the 29th May the bailiffs of Sourby and Werk in Tynedale are ordered to pay to the receiver £100 to fortify the castles of Carlisle and Dumfries at the seight of John de Weston and Dougal M'Dowall, their constables.

The accounts of the receiver at Carlisle for the year from 8th July, 1311, till 7th July, 1312, proceeds: "Sir Dougal M'Dowall Sheriff of Dumfries and constable of the castle for the munition of the same by the hands of Fergus M'Dowall his brother, receiver at Holm, and John de Monrethe, his clerk, receiver at Dumfries (during the year), 194 quarters 6 bushels oatmeal, 219 quarters 6 bushels oats, 1 cask 54 quarters, 1 bushel

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salt, 108 stock fish, 80 casks wine, 5 bands of iron, 18 gadds, 64 bacons."

On 23rd July, 1312, M'Dowall attested receipt by the hands of John Monrethe, his clerk, from the keeper of the king's stores at Carlisle, for the munition of his castle between 9th and 20th days of July current, of 70 quarters wheat and 7 casks wine; and similar receipts by the constable for provisions were granted on 24th September and 19th November.

The Constable being dissatisfied with the munitioning of his castle complained to the king, who on 8th August commands the keeper of the stores at Carlisle to supply victuals to the garrison of Dumfries, as Sir Dougal has complained of his negligence in aiding them, whereby many of his men have deserted.

At this stage someone, writing to the king from Dumfries, says:—"That Sir Robert de Bruce intended to send Sir Edward his brother with the greater part of his forces into England, while he himself attacks the castles of Dumfries, Buittle, and Carlaverock, remaining there, and sending his light troops to plunder the north, for their support."

BRUCE AGAIN IN POSSESSION.

Whether M'Dowall was unable to hold the castle through want of munitions and consequent desertions of his men, we do not know, but as noted on the account book of the receiver at Carlisle, the Castle of Dumfries was surrendered on 7th February of this 6th year (1313) to Sir Robert de Bruce by Sir Dougal M'Dowall.

In the year 1334, 12th June, Edward Balliol, the English King's minor, conveyed by charter to Edward III. the Town, Castle, and County of Dumfries, to be incorporated in the kingdom of England: and on the 15th of the same month Peter de Tilliol was appointed Sheriff of the County and Keeper of the Castle.

STATE OF THE COUNTRY AFTER BRUCE.

Shortly after the death of Bruce anarchy prevailed over Scotland, while the English were again under a strong and forceful King, Edward III. Dumfries in the year 1335 is still under English rule. Sir Eustace de Maxwell, who styles himself holder of the barony of Caerlaverock, is sheriff, and

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his accounts make it appear that the castle was waste. To the Sheriff, the King writes:—"The King to his beloved and faithful Eustace de Maxwell, our sheriff of Dumfries, in Scotland, Greeting; Since we have intrusted you with the keeping of our aforesaid county and the pertinents thereof, so that you may answer concerning the revenues accruing to us at our Exchequer of Berwick, as in our letters patent made thereupon is more fully contained, and have learned that the accounts which we hold you to be bound to render to us of your receipts of the said revenues from the time when you had the said charge, as yet remain to be rendered, at which we are much surprised; We therefore command you, firmly enjoining that, whenever you are forewarned by our beloved Thomas de Burgh, our chamberlain at Berwick, to render your said account at the aforesaid Exchequer, you, without making any excuse whatever, go and there render that account, as is customary, and according to the tenor of your commission above said; For we have commanded the foresaid chamberlain to hear that account and do further what the nature of the account requires in this part.

"The King being Witness; at the town of St. Johnstone, 13th day of August (1336); By the King himself."

Sir Eustace's accounts for the rents and dues of his sheriffdom discover how greatly the district had suffered through the war.

From many of the holdings both in town and country there was no return, because of their being waste, or for the reason that their holders had been ejected. The revenue suffered from this cause and also through the king granting lands to the sheriff and others on conditions terminating the dues to the crown. A few extracts will serve the present purpose.

This is the heading:—"Accounts of Eustace de Maxwell, sheriff of Dumfries, of the dues of the same county from the 15th day of October in the ninth year of king Edward the Third after the Conquest, up to the feast of St. Michael next following."

"The same renders account of £6 received from the term of St. Michael in the 9th year, from the Ward of the Castle of Dumfries, and not more, because the same sheriff will be able to raise nothing thence from the barony of Staplegorton, which was wont to render 20 shillings a year for the same ward, nor from the barony of Mallayknok, which was wont to render

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20 shillings a year to the said ward, etc. Of the dues from the Burgh of Kirkcudbright in Galloway, from the said 15th day of October in the 9th year, up to the 8th day of November next following, on which day the king granted to John Mareschal to be had and to be held by himself and his heirs until the same king shall have provided for him elsewhere within the kingdom of Scotland 20 marks of land, to be had by him and his heirs by brief, there is no reply, because the said burgh was waste at the time of this account. Of the Mote of the Castle, and certain demesne lands called Kingsholm, at Dumfries, which were wont to be worth 60 shillings a year, there is no reply, from the foresaid cause, etc."

"From the barony of Kirkmichael, which belonged to Philip de Moubray, deceased, who held it in capite of the King of Scotland on paying to the Ward of the Castle of Dumfries 10 shillings a year, and was wont to be worth 100 marks a year, from the 1st day of October in the 10th year, on which day the barony was taken into the king's hand, until the rights of the same barony is settled. . . . up to the feast of St. Michael next following, there is no reply, because it is waste. From the barony of Tinwald, which belonged to Peter de Middleton, deceased, who held of the king in capite for the service of paying 10 shillings to the ward of the king's castle of Dumfries, and which was wont to be worth £20 a year, from the 20th day of October until the feast of St. Michael next following, and remaining in the king's hands through the minority of the heir of the same Peter, there is no reply, for the reason foresaid, etc. The sum of the whole received, £17 18s 4d, and in wages of one man guarding payments in the same place receiving 1d a day during the time of this account, for 350 days, 29 shillings, 2 pence, and so he owes £16 9s 2d, which he has paid, and is satisfied."

The following relates to the Burgh:—

"Account of Gervase Avenel and William Malkynson, John Smerles and John de Lang, bailiffs of the burgh of Dumfries, from the said 15th day of October until the feast of St. Michael next following."

"The same renders account from the farm of the burgh of Dumfries from the terms of St. Martin and Whitsuntide last past, of £9 16s 8d, and 2 shillings due from the burgage of William Malkynson in the said burgh, being in the king's hand, through

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the ejection of John, son of Laghlan, and John Mounville through the time aforesaid. Of 16 pence of annual rent due from a certain holding of William Malkynson in the aforesaid burgh, remaining in the king's hand through the ejection of Gilbert de la Haye, and 8 pence of rent due from the holding of Gilbert le Smith in the same burgh, remaining in the King's hand through the ejection of the same Gilbert, there are no replies, because the two holdings lay waste at the time of this account. From one holding in the same burgh remaining in the king's hand through the ejection of Earl Patrick (who was also ejected from the lands of Glencairn) there is no reply, because the said holding was waste during the time of this account. The sum of the whole received £10 1s 0d, which they paid up on their account, and are satisfied."

The same bailiffs, William Malkynson and John Smerles, collectors, of the new customs, of Dumfries, accounted for 7 shillings and 11 pence received, which they paid at Berwick on the 12th day of September in the 10th year without acquittance, and are satisfied.

Famine was rife in the country. The English garrisons of Berwick and Jedburgh, driven from want of food to become bands of robbers, plundered friends and foes alike, and the men-at-arms, the foot soldiers, said seized the dead horses, leaving nothing for their sustenance. William de Dacre, writing to John bishop of Winchester, the Chancellor, "Tells the news of the march where he is, viz., that the vale of Annan is so utterly wasted and burned that from Lochmaben to Carlisle, on the Scottish side, there is neither man nor beast left."

CONCLUDING REMARKS.

We have endeavoured to recover something of the form and character of the Castle of Dumfries, and its relation to the distressful war so long carried on between the realms of England and Scotland.

The natural advantages of the situation, the formidable nature of the fortifications which we have seen, were cast about it by King Edward, and the vestiges which remain attest it to have been, according to the requirements of the time, a stronghold of no mean order; and it with Lochmaben and Caerlaverock commanded one of the gates of Scotland, and it served as a centre

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for military operations over a wide area of country around. One of the greatest of England's monarchs, Edward the First, reared its defences under his personal supervision; it was taken and retaken by a Scottish King, no less famous, Robert de Bruce; and with associations so interesting we submit that the vestiges of the ancient Edwardian Dyke at Dumfries is not less worthy of preservation than is the fragment of the wall of Berwick, which is now to be cared for and saved from further waste.

We may add that locally the castle was an important institution. Dumfries being the royal castle of the county constituted Dumfries a royal burgh, and the castle the headquarters of the sheriff as the royal authority over the shire. The baronies of the shire in a number of cases, as has been seen, were held by tenure of ward of the castle, which was also the head place or caput of the county within the old bounds, including Galloway on this side of Cree. Thus, as Dr George Neilson has shown, Archibald the Grim by charter provision of 1367, for his lordship of Galloway, was to pay a white rose of blench form yearly at our Castle of Dumfries.

5th January, 1906.

Chairman—Mr ROBERT MURRAY, V.P.

NEW MEMBERS.—Mrs Arnott, Sunnymead, Maxwelltown; Miss Chrystie, Irving Street; and Rev. J. Murphy, Park Road.

NOTES ON SOUTHERN NIGERIA. By JAMES WATT, M.A.

(Summarised by the Author.)

The Protectorate of Southern Nigeria was formed in 1900 by the amalgamation of the Niger Coast Protectorate with that part of the Royal Niger Company's Territory which lay to the south of Idah, on the River Niger. The High Commissioner of Southern Nigeria was made Governor and Commander-in-Chief of Lagos in 1904. The remaining portions of the Royal Niger Company's territories form the Protectorate of Northern Nigeria.

The estimated area of Southern Nigeria is 65,000 square

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miles; the native population is estimated at about three and a half millions.

The imports for 1904 were valued at £1,792,000; the exports at £1,718,000.

Forcados, the principal port, is about eighteen days' voyage from Liverpool. Steamers call at the Canary Islands, Sierra Leone, Monrovia, the Gold Coast, and Lagos.

The River Niger flows north and south through the Protectorate, and issues through many mouths connected by a network of creeks into the Gulf of Guinea. The Cross river forms a similar estuary in the east.

The region intersected by the creeks and outlets of these estuaries is swampy, and has few native settlements.

Beyond this lies the most fertile region of the Protectorate, rich in palm trees and well cultivated. It has low, rolling hills.

This extends as far as Ungwana, on the Cross River, and Onitsha, on the River Niger, where the true African continent may be said to begin. Beyond these points we have rock scenery.

In the Eastern part of the Protectorate is an interesting region of igneous rock formation, with granite, gneiss, and similar rocks. Here there are mountains forming part of the Kamerun system. Generally speaking, the rock formation of the remainder of the Protectorate is of sedimentary origin.

The principal exports are palm oil and palm kernels. Timber is a great and increasingly important article of trade. The cultivation of cotton is experimentally undertaken.

The oil palm grows in profusion in all parts of the Protectorate. Palm nuts grow in clusters of two or three feet in height. Oil is expressed from the fleshy, outer covering of the nuts. This leaves the hard nut, which, when cracked, yields the palm kernel.

Formerly the palm oil trade was largely in the hands of native middlemen, who collected the oil in the up-country markets and brought it to the European traders. Now the up-country traders are learning to bring their own produce direct to the European trading stations.

Trading firms at the present day have large establishments upon land. Formerly hulks were used. When trade was first established ships went round the various trading towns and gave

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credit to native traders. After completing their circuit, they went round again to collect the produce gathered by them.

The oil trade was the staple trade, which took the place of the slave trade, which did so much injury to the native races of West Africa and to the reputation of the European races which took part in it.

The Government has undertaken the charge of the forests, and prevents the deforestation of the country and the destruction of the rubber trees. Nurseries and plantations of rubber are established in the principal villages.

The British Cotton Growing Association has established two experimental plantations, and the natives are being encouraged in the cultivation of cotton.

Southern Nigeria is inhabited by a great variety of native races. The only great native State was Benin, whose people are superior in intelligence to the other races of the Protectorate.

Much good work is done by the various missions: that of the United Free Church at Calabar and those of the Church Missionary Society and the Roman Catholic Church upon the River Niger.

THE CHRYSANTHEMUM SPORT EXHIBITED AT LAST MEETING.

By the SECRETARY.

On the table at last meeting there was a specimen taken from a Chrysanthemum grown in the garden of Mr J. Bryce Duncan of Newlands, Kirkmahoe. Those who observed it will, perhaps, recollect that some of the flowers were of a canary yellow, others of an orange red shade, and another had one-half of the flower of either colour. The variety whence this was obtained is named Lizzie Adcock, which is itself a sport from one called Source d'Or. This sport at Newlands is remarkable as one which is derived from a variety hitherto giving the only recorded instance of a sport in which the flower head is composed of two equal divisions of colour, one not yet recorded in the family of Chrystanthemums save in the case of the variety Source d'Or and its sports. The typical Chrysanthemum called Source d'Or has bright orange-red flowers shaded with gold, but a sport of it is recorded which has given not only two colours but two different forms of florets on the one flower-head. This sport had half of the flower-head

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composed of spreading, flat, canary-yellow ray-florets, and the other half was composed of recurved dark golden bronze florets with revolute edges. The variety Lizzie Adcock, from which the Newlands flower originated, is a bright golden yellow flower. The Newlands sport showed a reversion in some of the flowers to almost the typical Source d'Or, but more bronzy than that variety, but others were more of a canary yellow than the parent, Lizzie Adcock. The other flower, which had half of its flower-head bronze and the other half canary yellow, had also the bronze coloured florets larger, broader, and possessing more substance than the others. The cause of these sports is difficult to account for, but I dealt incidentally with the subject in a paper I read to this society some time ago, and which is to be found in the Society's "Transactions," Vol. XVII.

Since writing that paper I have discovered an article dealing with the whole question of Chrysanthemum sports in the Journal of the Royal Horticultural Society, and contributed by Professor Henslow. It is too lengthy to be given here, but after an exhaustive analysis of the various sports, Professor Henslow discusses the question of the cause which produced these. In my own paper the general conclusion was that anything which tended to alter the conditions of growth increased the sporting tendency of the plant. Practically, Professor Henslow's conclusions are the same, climatic influences being apparently the most highly favoured by that able botanist. He also, however, speaks of nutrition as likely to have its effects, and recently some investigations made by Sir Sydney H. Vines, and referred to at some length in his presidential address to the Linnean Society of London, lead one to think that probably it is to the powers of nutrition that many variations are due. Popularly described, the investigations of Sir Sydney Vines and others show that plants possess much the same digestive secretions as ourselves and other animals, and that these are used to convert the stores of proteid they have built up, and which would otherwise be insoluble, into the materials they require by means of digestion into mobile matter. Probably we shall eventually discover how to influence these juices (to use a common expression) so as to modify the forms and colours of plants in a way hitherto impossible.

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26th January, 1906.

Chairman—The PRESIDENT.

NEW MEMBERS.—Mr and Mrs T. A. Halliday, Dumfries.

THE WEATHER OF 1905. By Rev. WILLIAM ANDSON.

The past year has been in some respects remarkable in point of weather. On the whole it has been a favourable year as far as temperature and sunshine are concerned, but marked by a deficiency of rainfall, which entitles it to be described as the driest of the last twenty years or more.

To begin with the barometrical pressure, on the variations of which the state of the weather so much depends, I find that the highest reading of the year occurred on the 12th December, when it rose to 30.890 in., and the lowest on the 15th March, when it fell to 28.365 in., thus giving an annual range of no less than 2.545 in. It is worthy of note that not only in December, but also in January, there was an exceedingly high reading, viz., of 30.856 in. on the 28th of that month. These are both abnormally high readings, occurring but rarely in many years. And taking the year as a whole, there were no fewer than six months in which the mean pressure (reduced to 32 degs. and sea-level) exceeded 30 inches. These months were January, February, May, June, July, and December; and they were all very favourable months in point of weather; while those which had the lowest mean pressure, viz., March, with a mean of 29.570 in., and November, with a mean of 29.601 in., were the most unfavourable. The mean pressure for the whole year was 29.933 in., which is a little above average. Low readings falling below 29 in. occurred in January, February, March, and November, which for the most part were accompanied by strong winds and heavy rains. But these cyclonic disturbances were on the whole less numerous than usual. One of the worst was about the middle of March, when a good deal of damage was done both by sea and land; and others occurred in the end of November and first part of December.

Temperature in the shade, 4 feet above the grass. The highest readings of the year were recorded on the 23rd June and the 9th July, when the s.r. thermometer registered 84.5 deg. The lowest reading was on the 19th November, when a minimum

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Report of Meteorological Observations taken at Dumfries during the year 1905.

Lat., 55° 4′ N.: Long., 3° 36′ W.; Elevation above sea level, 60 feet; Distance from the sea, 9 miles.
Rain Guage, 70 feet; Diameter of Rain Guage, 5 inches; Height of Rim above Ground, 10 inches.

1905.	BAROMETER.			S.R. THERMOMETER. In Shade, 4 feet above grass.					RAINFALL.			HYGRO-METER.		Temperature of Dew Point.	Relative Humidity. Sat. = 100.
Months.	Highest in Month.	Lowest in Month.	Monthly Range.	Highest in Month.	Lowest in Month.	Monthly Range.	Mean Maximum.	Mean Minimum.	Mean temper. of Month.	Heaviest in Month.	Amount for Month.	Days on which it fell.	Mean Dry Bulb.	Mean Wet Bulb.		
	In.	In.	In.	Deg.	Deg.	Deg.	Deg.	Deg.	Deg.	In.	In.		Deg.	Deg.	Deg.	
Jan.	30·856	28·941	1·915	54·	25·	29·	44·7	34·7	39·7	0·43	1·77	21	40·	38·3	35·8	86
Feb.	30·660	28·650	2·010	55·5	25·8	29·7	46·8	35·4	40·	0·58	1·94	15	40·2	38·	35·2	88
Mar.	30·290	28·395	1·895	61·	29·	32·	50·7	37·2	44·	0·48	4·06	24	43·	40·9	38·3	84
April	30·220	29·130	1·090	68·	25·3	37·7	51·6	37·	44·3	0·65	3·42	19	43·3	40·9	37·5	79
May	30·473	29·075	1·398	78·	31·3	41·2	60·2	42·6	51·4	1·57	2·01	12	52·	47·3	42·5	73
June	30·550	29·700	0·850	84·5	38·7	45·8	68·6	49·1	58·9	0·59	1·82	6	53·3	54·2	50·	73
July	30·273	29·629	0·644	84·5	41·3	43.2	70·8	53·1	62·	1·06	2·33	14	61·6	56·7	51·7	73
Aug.	30·300	29·181	1·119	75·5	39·3	36·2	65·	49·1	57·1	0·51	2·95	14	57·2	53·4	49·9	76
Sept.	30·347	29·273	1·074	71·	33·	38·	61·1	46·1	53·6	0·95	1·96	16	53·2	50·6	50·8	83
Oct.	30·550	29·003	1·547	63·	24·5	38·5	51·6	36·5	44·1	0·63	2·72	12	48·6	41·1	37·3	80
Nov.	30·221	28·670	1·551	52·5	19·	33·5	45·5	35·1	40·3	0·77	3·96	21	41·1	39·1	36·5	84
Dec.	30·360	29·371	1·519	52·	28·	24·	47·	40·	43·4	0·49	1·93	19	43·	41·3	38·9	86
Year..	30·360	28·365	2·546	84·5	19·	65·5	55·3	41·3	48·2	1·57	30·57	194	48·1	45·2	41·7	80

WIND—

N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Var.
16½	36½	29	46	20	86½	59½	53½	18½

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of 19 deg. was recorded. The annual range was thus 63.5 deg., and the mean temperature of the year was 48.2 deg. The annual means since I began to take observations in 1887 have varied from 46 deg. in 1892 to 49.5 deg. in 1898; the mean of nineteen years being 47.6 deg., so that the mean temperature of the past year was fully half-a-degree above the average. The warmest month of the year was July, with a mean of 62 deg., being two and a half degrees above the average; and the next warmest June, with a mean of 58.9 deg., which was also more than one degree above the average of 57.7 deg. And these were both extremely favourable months, with an amount of sunshine considerably in excess of the mean, and a larger proportion of really warm days than what is usual. June, for example, had five days with maxima exceeding 80 deg. and eight days with maxima of over 70 deg.; while July had sixteen days with maxima of 70 deg. to 80 deg., and two of them above 80 deg. The coldest month was January, with a mean of 39.7 deg., and the next coldest November, with a mean of 40.3 deg. The average mean temperature of November is 43 deg.; and the considerable deficiency which marked the November of 1905 was due to a cold snap which occurred between the 17th and the 21st in connection with a northerly type of weather, during which the lowest reading of the year was recorded, and it may also be noted that October had a similar experience of northerly, north-easterly, and north-westerly winds for about a week after the middle of the month, with night frosts of considerable severity, which lowered the mean temperature of the month from 47.6 deg., which is the average, to 44 deg., and for the particular week referred to after the 16th to 39.6 deg. The other winter months were characterised by extremely moderate weather, December, for example, showing a mean temperature of 43 deg., not less than 5 deg. above average, and January and February means of 2 deg. above average. It is a remarkable fact, which should not be passed over without notice, that there was a week in the beginning of December which had a temperature little more than one degree below that of the corresponding week in June, the one being 50.5 deg., and the other no more than 51.7 deg. This mildness of the winter months continued into March, which, though boisterous and unsettled, as it usually is, had a mean temperature three degrees above average, and was remarkably

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free from the northerly and easterly winds which commonly prevail at that season. But April brought a change, with a temperature scarcely higher than that of March, a snowstorm in the end of the first week, and an amount of frost in first half of the month which made it much liker a winter than a spring month. The aggregate degrees of frost were 16.4 deg., occurring in six nights, and exceeding that experienced in December. But this was more than compensated by the more auspicious weather of May and the summer months which followed, which were hailed as a happy return to the sunshine and warmth which are not infrequently conspicuous by their absence. The result was that, although the unfavourable weather of April, which was both cold and wet, awakened fears of a late harvest like that of 1903, it turned out to be earlier than usual, except in the far north, which was subjected to rainier conditions, and proved to be both abundant in quantity and excellent in quality.

I now pass on to the rainfall, in the deficiency of which we find the special characteristic of the weather of 1905, which distinguishes it from that of many previous years. The whole amount for the year was 30.57 in., with 194 days on which it fell. I have not noticed in this account the days in which snow fell and the amount separately from rain. But I find on looking over the record that there were only four days on which this occurred, two in January, one in February, and one in April, and that the amount when melted and measured was only 0.49 in. The average annual amount over nineteen years is 37.31 in., so that the deficiency for the past year was nearly seven inches, which is equivalent to almost seven hundred tons of water per acre. This deficiency was spread over the greatest part of the year. There were nine months in which the amount was less than the average, viz., January, February, May, June, July, August, September, October, and December; and only three in which it was above, viz., March, April, and November. The wettest month was March, with a record of 4.06 in., which is an inch and a half more than the mean, and the driest was January, which is nearly the same amount less than the mean. One peculiarity of the past year was the dryness of the winter months, January, February, and December; but it was likewise characteristic of the late spring and summer months, May, June, and July, during which the comparative absence of cloudy skies and frequent showers resulted in

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a proportionate increase of the sunshine and warmth which are so important at that season of the year; while August also, although marked by greater rainfall than the preceding months, was also comparatively dry and warm; and September, so important as a harvest month, was dry and cool. The following note will bring out the dryness of these months:—In May there was a period of 16 days, from the 7th to the 23rd, during which only 0.01 in. of rain fell. In June there were 11 days from the 6th to the 16th, which were rainless, and again from the 21st to the 30th, and this was continued into July for ten days, so that from the 21st June to the 10th July there was a rainless period of no less than 20 days. Once more in September there was no rain from the 15th to the 27th, a period of 12 days. In respect of rainfall, 1905 was the antithesis of 1903, for, while the latter was the wettest of all the years over which my observations have extended, with a record of 50.45 in., 1905 was absolutely the driest. The only approach to its record of 30.57 in. was in 1902 and 1887, which registered 30.90 and 30.99 in. The result of this unusual dryness was that in many parts of the country there was a scarcity in the water supply for domestic and industrial purposes, which caused no small amount of inconvenience. But this was more felt in the eastern side of the country, where the normal rainfall is considerably less than in our own south-western district. And perhaps it will not be considered out of place that I should take notice of its effect upon the river Nith and upon the salmon fishing carried on during the netting season. So low was the river during the greater part of that season, and so rarely was it flooded, that the conditions were very unfavourable for the ascent of the fish to the upper reaches; and the fishing was in consequence exceedingly unproductive, so unproductive, as Mr Turner informed me, as to be insufficient to pay the expense of working it. Both these facts tend to show that while a dry season may have its pleasures and advantages it has also its drawbacks and disadvantages. To this account of the state of the river during the past year I may add that there was one occasion on which the tide rose to so great a height as to overtop the caul or weir, and to cause the most extensive flooding of the Sands. This was not due in any degree to the river, for there had been but little rainfall immediately before, but solely to an extraordinarily high tide on the second day after the full moon in

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March, and during the prevalence of strong southerly and south-westerly winds. I believe this is not an altogether unprecedented phenomenon, but it is at least exceedingly rare, so rare that I do not myself remember of having observed it during the nearly twenty years to which my observations extend.

With regard to the hygrometrical observations, I have only to add that the mean reading of the dry bulb thermometer for the year was 48.1 deg., almost exactly the same as the annual mean temperature, which is 48.2 deg. And the mean reading of the wet bulb was 45.2 deg.—from which the temperature of the dew-point was calculated as 41.7 deg., and the relative humidity at 80 (saturation being equal to 100). This is lower than the average by 3, the annual mean over a series of years being fully 83, and corresponds with the comparative dryness of the year. With regard to wind direction, the most prevalent, as usual, was S.W., which blew on 86½ days; the next, W., with 59½ days, and N.W., with 53½. South blew on 20 days, S.E. on 46; N.E. on 36½; E. on 29; N. on 16½; and calm or variable was 18½. The sum of those with a southerly and westerly direction was 206, and of those with a northerly and easterly was 135.

The Chairman asked how Mr Andson accounted for the extraordinary rainfall of 150 inches on the Cumberland hills, and also what was the general track of storms visiting the country.

Mr Andson said that the great rainfall mentioned by the president was recorded at a station in the Cumberland hills situated four or five hundred feet above sea level, and it was the situation in the midst of the Cumberland mountains that accounted for the rainfall, as also did the elevation of some parts in the midst of the Galloway hills, where the fall was 50 or 60 inches. At the approach of a depression the wind usually backed to the south-east, and then veered to the south, south-west, and west.

Dr Maxwell Ross moved a cordial vote of thanks to Mr Andson for his valuable contribution. It was specially interesting in relation to the state of water supplies and to the river Nith. He was much interested to observe that, although in the case of the Dumfries observation station the rainfall for 1905 had been the lowest that Mr Andson had recorded, yet it was not the lowest at some of the other stations. For example, in the case of the

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stations at Lochmaben and Ericstane, the rainfall for the year was slightly in excess of that of 1902; and Dr Hugh Robert Mill, in his preliminary communication to the "Times" the other day, indicated that, while last year was certainly a dry year, we had to go back to 1889 to get a year in which there was less rainfall. With reference to the reputation for heavy rainfalls in the west of Scotland, it was noticeable that the increase in the rainfall last year was recorded not in the west, but in the east of Scotland—Aberdeenshire and at stations south of the Moray Firth. There the rainfall was somewhat in excess of the normal. Taking the British Isles altogether, the average loss for the year would be about five and one-tenth inches. That represented a considerable reduction in the rainfall, and it explained why it had happened that so many towns had experienced a deficiency in their water supply. There had been numerous complaints of such deficiencies in this district, all largely due to the low rainfall. Dr Ross mentioned that from reports sent to him from such stations as Castle Milk, Lochmaben, Ericstane, and Ewes, he gathered that the average rainfall for Dumfriesshire was about 39 inches for the year. At Cargen it was lower than it had been for a number of years, being 34 inches. The rainfall there was always greater than it was at Dumfries, because of the situation of the place.

EXCAVATIONS AT HOLYWOOD. By Dr J. W. MARTIN.

Dr Martin related the results of certain excavations in connection with the extension of the churchyard at Holywood. These, he said, revealed the presence of a very solid and lasting building, which there could be no doubt was nothing less than the ancient walls of the old abbey of Holywood. A great stone wall of masonry had been encountered beneath the surface, running east and west, and extending from the roadway about 45 feet. The wall was made up of large freestone blocks in front, large whinstone blocks behind, with a solid packing of lime and masonry. The breadth of the whole was about six feet, and at one part as much as 7 feet 3 inches; while the height was about 5 feet 6 inches. A number of curious moulded stones had also been found. Dr Martin supplemented his description of the ruins by the production of a number of human bones found on

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the scene, and he also showed coins (one of them of the period of Henry II.) found in graves in the churchyard.

Mr Barbour observed that the ruins that had been excavated were certainly part of the ancient abbey buildings, but whether they were part of the ancient abbey itself or not was another question. Personally, he would not go the length of saying so, though there were certain evidences to support the theory. He had not seen any positive evidence of ecclesiastical buildings at the churchyard, however, and he did not think they should go beyond what they could actually prove. A great many interesting mouldings had been found, and it was to be learned from these that the period was generally early English. He produced a slate that had been unearthed, and which he supposed must at one time have been taken from a quarry at Routin' Bridge, where such slate was to be found. He also produced a very curious carved stone, the character of which showed that the original sculptors must have possessed a good deal of humour.* Mr Barbour added that he was informed the heritors of Holywood had agreed to the preservation of the excavated wall.

2nd February, 1906.

Chairman—Mr JAMES BARBOUR, V.P.

EXTRACTS FROM THE RECORDS OF THE BURGH OF LOCHMABEN.

By E. B. RAE, Town Clerk.

Lochmaben may justly claim to be considered one of the oldest burghs in Scotland, having been the capital of the Western Marches and ancient shire or Stewartry of Annandale. Various conjectures, more ingenious than correct, have been made as to the origin of the name of the burgh. The Gaelic loch-maol-ben signifies the Lake of the Bald or Smooth eminences, hence Lochmaben. The father of the present laird of Rammerscales, who was an authority on the subject, considered that Malben or Maben was simply a contraction for Magdalen, the patron saint of the burgh, hence Loch Malben or Maben. It was also supposed

* A plan of the wall is preserved in the Society's Portfolio.

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to be called Loch-ma-ban, meaning "The Lake in the White Plain," in allusion, it is presumed, to the white mists that prevailed at certain seasons of the year. The most probable conjecture is that Mabon, meaning a warrior, gave the name to the burgh, which in ancient times was no doubt the birthplace of heroes and warriors. In this connection it is curious to note that the name Mabon is conferred upon a well-known Welsh member of Parliament.

The existing Charter of the Burgh was granted by King James VI., and is dated 16th July, 1612. The narrative clause is as follows: "Be it known, Because, understanding that our most noble Progenitors of most worthy memory, and beyond the memory of man, erected and called the town of Lochmaben, lying in the Western Marches of our Kingdom of Scotland, within our Stewartry of Annandale, into a free Royal Burgh, with all and sundry the privileges and immunities of a free burgh; and also gave and granted to the free Burgesses and Inhabitants of the same, and their successors, divers and various lands, fishings, farms, profits, and possessions of the same; And that the said Burgesses and free Inhabitants of the said Burgh of Lochmaben and their predecessors, beyond the memory of men, were in possession of the said lands with the pertinents lying within the bounds above mentioned, as their own proper lands without any impediment and obstacles; and on account of the by-past great tumults, disturbances and wars, and incursions of foreign enemies, which were at that time in Scotland, the said Burgh of Lochmaben was often and at divers times burnt and spoiled, with all the ancient Charters, Infeftments, Evidents, and Erections of the said Burgh given and granted by our most noble progenitors, all which being within the said Burgh at the time were lost, burned, and destroyed." It will be seen from the terms of the narrative clause that this is not the original charter of the burgh. Tradition says that Lochmaben was created a royal burgh by King Robert the Bruce; and the Reddendo clause of the charter shows that it was a royal burgh in the year 1447, for the burgh maill of 40s is declared to be "the ancient duty formerly paid by the Provost and Bailies of the said burgh according to an account rendered by them in our Exchequer in the year 1447." As the burgh had its Provost and Bailies in the year 1447, and paid burgh maill like other burghs, it is very probable that it had

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existed as a royal burgh for at least a century before, and owed its origin to King Robert the Bruce.

The original burgh charter, believed to have been granted by Robert the Bruce, is said to have been destroyed in 1463, when the town of Lochmaben was burnt in a raid made by the Earl of Warwick. The early records of the burgh have disappeared in some mysterious way, and no trace of them can be found. The minute books of the burgh are also defective, and do not go further back than 1718. The first minute is dated 29th September, 1718, when the annual election of the Provost, Magistrates, and Councillors was held, William, Marquis of Annandale, being elected provost. As shewing the free and easy customs indulged in by the inhabitants, it is recorded that complaints having been made to the Town Council that the streets were obstructed by some of the inhabitants of the burgh being in the habit of building peat stacks and laying down middens in the streets, a committee was appointed to deal with the matter, and a penalty of 10 pounds Scots imposed upon any inhabitant continuing the practice thereafter. On 24th September, 1720, the Town Council, "taking under their consideration the great loss which the community is at through the want of a tolbooth, they unanimously resolved that whatever money shall be found in the treasurer's hands or due to the town shall be applied towards the building of a Tolbooth, and seeing that the town will not of themselves be able to promote and accomplish so good and useful a work they request John Shand to make application at the next annual convention for help that way, also to apply to the Marquis of Annandale, late Provost and Steward of the Stewartry, for assistance towards the building thereof." In the following year the subject was again considered by the Town Council, and, as it was reported to them that many well-wishers to the burgh were willing to contribute towards the building of a Tolbooth provided their generosity was not misconstrued, the Council resolved, 'to accept of what any person pleases to contribute or give that way upon this express provision, that the person that is the giver declares by a writ under his hand that it is not in view of the elections of the burgh, but given as a free gratuity, and the person or persons giving are to be recorded in the town's books with the sums given by them, and the Magistrates and Council hereby promise and declare faithfully that they shall not on account of anything that

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may be given that way promise votes to any person or persons in the future elections.' " The Marquis of Annandale contributed 750 merks Scots towards the building, in addition to 400 merks Scots previously subscribed by him. On 29th September, 1722, the first reference to the town clerk is made, where it is stated that Captain John Henderson of Broadholm, who had been appointed in 1702 town clerk for life, "for giving out extracts of the Acts of Council to those that had not agreement or interest, but only designed to subvert the constitution of the Burgh, and to disturb the peace of the burgh by pretended reductions of the late elections to the injury of the public good thereof, the said Mr Henderson being an abettor and promotor of these disturbances," the Town Council annulled and made void the Acts of Council under which he had been appointed, and dismissed him from office, and appointed Captain John Hounslow as town clerk in his place. In the minute of 27th August, 1723, it is noted that the Bailies and other members of the Town Council appeared before two ministers appointed by the Presbytery of Lochmaben, and declared a call in favour of the Rev. Edward Banockle as minister of Lochmaben. The following entry, on 8th November, 1728, speaks for itself:—"The which day the Magistrates and Council of the Burgh being assembled in common council, and having under their consideration the several and repeated complaints made to them on account of several of the heritors within the burgh setting houses to persons who could not give any account of themselves, and wanting certificates of their last abode, and also considering a petition given into them this day by the minister and elders, complaining that the persons therein mentioned and others now living within the burgh without certificates of their former abodes, and recommended to the Magistrates to exercise their power against such persons, who cannot give an account of themselves, and likewise having under their consideration that several persons come to reside within the burgh and exercise their employments such as merchant traders, sellers of all kinds, keepers of public-houses, and others exercising their trade as mechanics without so much as acknowledging the magistrates or recognising their freedom to exercise their said employments according to the custom and laws of Royal Burghs; therefore the Magistrates and Council, in order to prevent such practices, doth enact and hereby enacts that for hereafter no

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heritor within the Burgh shall set any house to any persons whatsomever without first they advise the magistrates that they may know the character of the persons, and that under the penalty of four pounds Scots for each failure, and that each heritor shall enact themselves that any such houses shall in no manner of way be hurtful or burdensome to the burgh, and it is likewise hereby enacted that no persons whatsomever that shall happen to come and reside within the Burgh shall exercise any employment or trade within the same without first applying to the Magistrates for their freedom under the pains contained in the Act of Burghs, and practised by the burghs, and the Burgh Officer is hereby ordered to make out a list betwixt now and the next meeting of the Council of those persons in the Burgh that have exercised their employments or trade within these three years past and have not applied to the Magistrates, that justice may be done."

The Common Good of the Burgh in 1730 was so small in amount that Provost Sir James Johnstone intimated to the Council at their annual election meeting that he would pay his own expenses in attending the Convention of Royal Burghs as the Council's representative, and at the same time would discharge the burgh for all past expenses incurred by his late father in representing the burgh.

In the Charter of the Burgh power is given to hold a market weekly on Sunday, along with two free fairs in the year, viz., on St. Magdalene's and St. Michael's Days, and continuing the same for the space of eight days. By minute of meeting of 14th June, 1731, the Magistrates appointed Bailie Henderson "to get printed advertisements for the Saint Magdalene Fair of Lochmaben, to be holden on the last Thursday of July, customs free for all horses, sheep, lambs, kye, and merchant ware, and for the encouragement of those that bring lambs and get them not sold to get liberty for them to be grassed till the Thursday after, being Lockerbie market." Some of the subscribers to the building of the Tolbooth not having paid their subscriptions, the Council, by minute on 13th October, 1732, ordained the clerk to make out a list from the Town Book of such gentlemen as subscribed, and were deficient, and ordained that the deficients be spoke with to pay up to the extent of their obligations, and if they declined they were to be sued for payment in the jurisdiction wherein they lived. On the same date the Council appointed the Burgh

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Marches to be ridden upon the 30th day of October next. This entry is interesting as being the first intimation in the existing burgh records of this ancient ceremony being carried out. It does not appear to have been made an annual event in Lochmaben, as is the case in a few other burghs, but was revived at intervals of a few years. In the minute of 18th August, 1733, Lord Hope's resignation as a Councillor is inserted as follows:—"I, Lord John Hope, one of the Town Council of the Burgh of Lochmaben, considering that I cannot attend the consultations about the affairs of the said burgh or the elections thereof, therefore I hereby resign and renounce my place and office as one of the Council of the town of Lochmaben with all the privileges thereto belonging, and that in the hands of the Magistrates and Town Council of the said Burgh of Lochmaben, with power to them to elect and choose another Councillor in my place with the same privileges that belonged to me."

At a meeting held on 17th May following, in reply to a protest made by Sir James Johnstone of Westerhall as to certain illegalities at the meeting which accepted of Lord Hope's resignation, it is mentioned that the Council "shall be extremely glad that all culpable and underhand dealing be brought to light before a competent judge that it may appear who were the authors and promoters of them."

In explanation of the following minute it may be stated that under the Scottish Parliament the burgh returned one member elected by the Council. From the Union to 1832 the Town Councils of each burgh chose a delegate, with whom the election rested. The election of a delegate often gave rise to scenes of riot and disorder, as we shall afterwards see, as the Lochmaben representative was understood to have the casting vote and considerable responsibility was attached to the appointment.

"25th April, 1735.—The which day the Provost, Magistrates, and Council of the Burgh being met in common council assembled there, Mr William Kirkpatrick of Ellisland, advocate, one of the present Council, proposed to the Council that he was willing to serve the Burgh with the other Burghs of this district as their Burgess in the present current Parliament of Great Britain if they should think fit to judge him a fit person for that purpose, and then he withdrew: which proposition being considered by the Magistrates and Council, they do unanimously accept of the pro-

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position made by the said Mr William Kirkpatrick, and intreat the Provost in name of the Council to give Mr Kirkpatrick their thanks for his kind offer, and do hereby unanimously declare that it is their opinion that the said Mr William Kirkpatrick is a very fit person to represent them and the other burghs of this class or district of burghs to serve as their burgess in this present current Parliament of Great Britain, and in testimony of our sincerity we have hereunto set our hands and subscriptions, and Mr Kirkpatrick being called up this was read to him, who thereafter made his compliments to the Council testifying his acceptance, and by the unanimous appointment of the Council this declaration was recorded as above, and ordered a just copy, signed as aforesaid by the Magistrates and Council, to be delivered into the hands of the said Mr William Kirkpatrick."

The Town Council were frequently called upon to interfere in matters which at the present day would be determined by the civil law, as the following minute, dated 20th August, 1735, shows:—"The Magistrates and Council having had several complaints made to them of the damage sustained by many of the inhabitants through some persons allowing their beasts loose on the crofts and entering their neighbour's young stubble and grass, to prevent which for the future, and that in justice every person may enjoy his own right, the Magistrates and Council do hereby forbid and discharge all persons within the burgh or territories thereof from feeding their beasts upon any stubble or grass save what belongs to themselves allenarly, and no ways to incroach upon their neighbours from and after this day until Hallowday next under the penalty of half a merk Scots for each transgression, and any person poinding the transgressor's beasts from off his ground shall entitle him to the above penalties, and this to be a standing order in all time coming, and appoints the town officer to proclaim this by beat of drum that none pretend ignorance."

An offer from the Marquis of Annandale in 1741 of the sum of £150 towards the building of a Town House and Steeple, "which his lordship from a regard to the burgh had made them a present of," was gratefully accepted by the Council.

The following address, presented by the Town Council on 10th March, 1742, to Lord John Johnstone, M.P. for the Dumfries Burghs, must have been very gratifying to him. The "critical juncture" mentioned in the address no doubt referred to the war

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with Spain, which Walpole, very unwillingly, was driven into in 1739 by the clamours of the nation. The war was carried on by him in a half-hearted way, and disaster succeeded disaster. He was bitterly attacked in Parliament, and early in 1742 he was defeated in the House of Commons and forced to resign. George II. was King at this period. The address is as follows:—"To the honourable Lord John Johnstone, Member of Parliament for the District of Burghs of Dumfries, Kirkcudbright, Annan, Lochmaben, and Sanquhar.—This court as one of the five burghs of the districts you represent in Parliament, take this public occasion to acknowledge a grateful sense of and return you our hearty thanks for your wise and prudent conduct so agreeable to the inclinations of your constituents at this critical juncture; and as we are firmly persuaded that the honour and dignity of His Majesty and Royal Family and the true interest and welfare of the nation are what you always have in view, we with great cheerfulness and unanimity take this occasion to recommend to you at this juncture that you will contribute as much as in your power to a strict inquiry into the sources of all the complications that for some time past the nation has laboured under, and that you will thoroughly promote all Bills for such salutary laws that shall be proposed in the House of Commons in order to these ends, and the restoring and preserving the constitutions and happiness of the nations from all attempts of open or secret corruption of any kind whatsoever."

It is disappointing to find that there is no record of the affairs of the burgh from June, 1743, to March, 1750, the leaves of the Minute Book embracing that period having been presumably torn out. This loss is to be regretted the more because the period in question included the Jacobite rebellion and the stirring events which ensued upon the crossing of the Border by the Jacobite army. It is very probable that reference would be made to such an important incident in the records of the burgh.

23rd August, 1761.—The Magistrates and Town Council, considering the low state of the burgh and the small trade carried on in it, and also considering the spirit of improving of common grounds now universal in the country, resolved to feu out a portion of the burgh's community in accordance with a plan ordered to be prepared, and appointed the town clerk to advertise the public roup of same in the "Edinburgh Courant" and the

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burgh officers to advertise the same in the burgh by tuck of drum and placard it in the Cross and Church dours.

At the annual meeting for the election of Magistrates and Councillors, held on 29th September, 1762, Francis Carruthers of Dormont was proposed as a councillor, but he was objected to by ex-Provost Dickson on the ground that he was not a heritor in the burgh or a resident burgess, and the rather strong statement was made that his being proposed as a councillor had been brought about by undue influence, deceit, and perjury. In answer to the above objection, "no regard ought to be had to it, as it has been the continual practice of this burgh to admit councillors who were not heritors within the burgh, and as to the ill-natured objection thrown out that he was brought in by undue influence, deceit, and perjury, the same is denied, and leaves the proposer to make good his objection." In the result Mr Carruthers was elected a councillor; but the dispute, unfortunately for the Town Clerk, did not end with his election. Six months afterwards, on 19th February, at a meeting held on that date, it is minuted that "the Magistrates and Council, taking into their consideration the conduct of John Dickson, their clerk, at the last annual election of Magistrates and Councillors in his having most injuriously and impudently insinuated privately, and in having expressed publicly, that the bringing in Mr Carruthers of Dormont into the Council proceeded from fraud, deceit, and perjury, and by ingrossing these words into the minutes of election in a clandestine way, with a manifest intention to throw a base imputation upon the conduct and character of the Magistrates and Council, and the Council being conscious that their conduct in the whole measures that were pursued at the last election followed from a conviction in their own minds that they were acting upon just and honourable principles and for the public good of the burgh, and considering that such ill-natured and scurillous assertions must have proceeded from wicked motives in the said John Dickson, who is their servant, and ought to be severely censured, therefore the Magistrates and Council do hereby not only unanimously declare their consciousness of the injustice of the imputation made by the said John Dickson, but also ordain him to be summoned to the Council to answer to his conduct at that time; they therefore appoint one of the officers

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to summons him to appear upon Monday, the 21st curt, at 6 o'clock at night.

Mr Dickson ten days afterwards appeared before the Council and tendered an apology for his conduct, having been, he stated, in a passion when he uttered the expressions complained of.

An entry in the minutes of 10th June, 1784, is of interest to Freemasons, the Magistrates on that date having agreed to feu to the Freemasons of St. Magdalen a piece of ground for the erection of an "ornamental" lodge at the south end of the High Street, where the Parish Church now stands, the feu duty to be one penny yearly if asked only, Dr Robert Clapperton, the R.W.M. of the Lodge, to hold the feu in name of the grantees. It may be noted in passing that the Dr Clapperton here referred to was the father of the famous African traveller, Captain Hugh Clapperton.

The year 1790 proved to be an eventful year in the history of the burgh. Party feeling ran very high, and for a time mob law held sway. A meeting of the Magistrates and Town Council was convened for 8th July, 1790, for the purpose of electing a Commissioner or Delegate to represent the Burgh of Lochmaben at the ensuing election for choosing a Burgess to serve in Parliament. The minute of meeting bears that eight members of the Council met on the above date in the dwelling-house of Bailie Dickson prior to attending a meeting of the whole Council in the Town House, when a riotous, tumultuous, and outrageous mob assembled within the burgh, and having not only assaulted and attacked the Magistrates and Councillors who were assembled in the dwelling-house, but forcibly and violently broke into the house and carried off Bailie John Bryden by open force and violence, and the mob having also again returned to Bailie Dickson's house with the declared intention of seizing and carrying off from the election another of the councillors, the other Magistrates and Councillors present were not only so much intimidated by the threats and outrages of the mob, that they were under the necessity of flying from the burgh for the safety of their lives. The other Councillors who were not present, but intended to be at the meeting, were prevented by the threats and outrages of the mob from entering the town, although they attempted to do so. They ultimately all met at Townfoot of Mouswald, "finding that to be the first and only place of safety where they had hitherto been able to meet for freely and

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indifferently electing a Delegate." In the absence of the Town Clerk, Mr Lindsay (who will be heard of again), the meeting appointed Thomas Dickson, late writer in Lochmaben, and residing in Mouswald, and Francis Shortt, writer in Dumfries, conjunct and common clerks of the burgh. The seal of the burgh, being in the hands of the late clerk, could not be appended to the commission in favour of the delegate appointed, and the difficulty was got over by adopting as the seal of the burgh the private seal of Mr Francis Shortt until the common seal could be recovered. The election of a Delegate thereafter duly took place, in terms of the precept addressed to them by the Sheriff.

On 29th September, in the same year, another violent disturbance took place in the burgh on the occasion of the annual election of the Magistrates and Town Council. Eight members of the Council having met in Bailie Dickson's house prior to the meeting, they proceeded at the ringing of the town bell to leave for the Council House. When near the foot of the stair leading thereto they were obstructed and interrupted by a numerous and outrageous mob, who seized Bailie John Bryden and violently thrust him into a post chaise, in defiance of every resistance that could be made at the time, and carried him off to Annan. The Magistrates and Councillors were compelled by the violence of the mob to return to Bailie Dickson's house, where they waited until Bailie Bryden joined them after regaining his liberty, and thereafter proceeded to the election of Magistrates and Councillors in due form, Bailie Dickson being appointed Provost. Whilst this election was taking place an opposition meeting under the protection of the mob was being held in the Council House, also for the purpose of electing a new Town Council, and the result was that two sets of Magistrates and Councillors were elected. To complete this remarkable state of matters, Mr Francis Shortt was elected Town Clerk at the meeting held in the Provost's house and Mr John Lindsay was elected Clerk at the meeting held in the Council House. Both sides presented petitions and complaints to the Court of Session, and at a meeting of Council, held on 12th August, 1791, Provost Dickson reported that the Court of Session had decided that the election which took place in his house on 29th September, 1790, was the only legal and valid election of the Magistrates and Councillors of the Burgh of Lochmaben, and that those elected had the only

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good and undoubted right to take the government and administration of the burgh till Michaelmas next; the Court had, therefore, dismissed the complaint in name of Robert Maxwell (who had been elected Provost) and others, and found them jointly and severally liable to Provost Dickson and the other complainers in expenses, which they modified to the sum of three hundred pounds sterling, besides the fees of extract, which amounted to £82 11s 0d.

Closely associated with the lawless proceedings before narrated, a notable trial took place in the High Court of Justiciary at Edinburgh in January, 1797, when eight men were charged with the masterful seizing, carrying off by violence, and detaining William Walls, a councillor of the Burgh of Lochmaben, with a view to influence the election of the member of Parliament there. The names of the accused persons were as follows: John Lindsay, writer and messenger at arms in Lochmaben; Duncan Henderson, residenter in Dumfries; John Henderson, his son; William Steedman, lately returned from America, and then residing at Lochmaben; John Dobie, son of John Dobie, late of Tundergarth; John Lockerbie, residenter in Lochmaben; Peter Forrester, joiner in Lochmaben; and James Thorburn, mason in Blackrig, near Lochmaben. Councillor Walls at the trial deponed that, being entitled to vote for a delegate from that burgh, he had, previous to the election, announced his intention of supporting Mr Millar's interest, in opposition to that of Sir James Johnstone; that Mr Lindsay, one of the accused, and who acted as agent for Sir James, had offered him £200 if he would take a walk with him on the day of election, which he rejected in the strongest terms, declaring that £2000 should not tempt him. It was then a common rumour in the burgh that Sir James's friends had hinted if every other source failed them they were determined to carry off one of the voters of the other party. Knowing this, Walls took every precaution to prevent the contemplated outrage, and for greater security slept at the house of his son-in-law, William Neilson. On a Sunday afternoon following he was asked by his son-in-law to accompany him to a field near the town where they had some cattle. They accordingly went to the field, accompanied by William Graham, another councillor and voter in Lochmaben. When there a chaise made its appearance, and the driver came into the field and called to William Walls that a gentleman in

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the chaise wished to speak with him. Becoming alarmed, Walls and those who were with him ran off, with a view to escaping, but were pursued by a party of men armed with pistols, swords, bludgeons, etc., who seized Walls and carried him by force to the chaise, and Steedman, Dobie, and Thorburn having also got in, it immediately drove off. At some distance on the road a coat was put into the chaise for Walls, who had thrown off his own in endeavouring to escape. They proceeded to Ecclefechan, where an additional pair of horses were procured; from thence they went to Gretnahall; and so on to Carlisle, where Thorburn left them, and Walls went on to London with Steedman and Dobie. He was detained in London for some days, and afterwards conveyed to Leatherhead, in Surrey, where he was ultimately released upon the arrival of Mr George Williamson, and immediately proceeded to Scotland, his captors for the time being making good their escape. The defence was that Walls was carried off with his own consent, and a large number of witnesses were examined on behalf of the accused. One of these witnesses, described as a waiter at the inn at Lochmaben, having stated that he had left Walls at a late hour in his own house on the night before his capture, was committed to prison for perjury, as it was clearly proved that Walls had slept in the house of his son-in-law. The reporter of the case, with righteous indignation, remarks: "The whole of the evidence presented a picture of burgh politics degrading to human nature, and we are afraid not peculiar to the Burgh of Lochmaben." The Lord Justice Clerk, in summing up, said that the case was one of the most important trials that had come before the Court in his time. Having gone over the principal evidence, he concluded with an eulogium on the flourishing state of the country, which he attributed in great measure to our right of electing our representatives, the exercise of which should be kept as pure and undefiled as possible. The jury returned a verdict of guilty against Lindsay, Lockerbie, Forrest, and Thorburn. The Court in passing sentence observed that the crime of which they were convicted was of an enormous nature, and deserved exemplary punishment. Lord Eskgrove, however, was inclined to mitigate that punishment in the present case, as it was one of those crimes which the common people did not think would be attended with such fatal consequences. The Lord Justice Clerk said that the

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offence was rebellion against the Constitution, and if it was a vulgar error that the crime was of a trivial nature, the punishment ought to be the greater, that that mistaken notion might be corrected. The sentence of the Court was that Lockerbie, Forrest, and Thorburn be whipt through the streets of Edinburgh on Wednesday, 23rd January, to be then set at liberty, and to be allowed three weeks to settle their affairs, thereafter to banish themselves furth of Scotland for seven years; Lindsay (the writer and messenger-at-arms) to be fined £50 sterling, to be delivered to the Clerk of Court, to be imprisoned three months in the tolbooth of Canongate, and thereafter till payment of the above sum, after his liberation to be allowed three months to settle his affairs, and then to banish himself furth of Scotland for seven years.

A great grand-daughter of Mr Lindsay, who resides in Lochmaben, informs me that the sentence in his case was not carried out, powerful influence having been brought to bear upon the Government of the day to have the penalty remitted. He married a sister of Miss Jeffray, the lady who is immortalised as "the Blue-eyed Lassie" in Burns's song of that name, and who was a daughter of the minister of Lochmaben.

At a meeting of Council, held on 14th August, 1797, the Magistrates represented to the meeting that a number of complaints had of late been made to them by different people who had suffered great loss by swine being allowed to go at liberty in the crofts and streets of the burgh, the meeting taking it into their consideration, do hereby resolve and enact that if any person within the burgh shall allow their swine to go at liberty betwixt the 1st day of March and the 1st day of November in all time coming, for the first offence they shall pay a fine of five shillings, and the next offence doubled, the one-half of the fine to be given to the poor of the parish and other half to be disposed of as the Magistrates shall think proper.

On 10th March, 1799, the Magistrates and Council being met and taking into their consideration that there are only two burgh officers who have the usual salary of six shillings and eightpence sterling each per annum, and they being of opinion that it would be necessary to appoint two more, we do hereby nominate and appoint William Carruthers and Richard Beattie, both in Lochmaben, burgh officers, without any salary annexed to it,

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and they, being present, accepted of the same and gave their oaths *de fideli* in common form, appointment to be during our pleasure.

The salary of 6s 8d, above referred to, is still paid to the burgh officer, who, however, is remunerated for other duties, and that amount until recent years was also the fixed salary of the Town Clerk.

The ancient ceremony of Riding the Marches, referred to in minute of meeting of 13th October, 1732, was in 1799 again revived, the Provost at a meeting held on 30th July in that year having brought the subject before the Council. The minute runs as follows: "The Provost represented that in former years it was the practice of the burgh that the Magistrates, Council, and community should ride the marches, as described in the Charter of the Burgh, and that as this practice had been omitted for some years it would be highly expedient to bring it again into use, in order that the present Magistrates, Council, and community should know and be acquainted with the marches and boundaries of the Royalty, the more especially as there are several old persons now living who have seen the marches rode in former years, and who are thereby well acquainted with the same. He therefore moved that a day should be appointed, and public notice given thereof, and the motion having been unanimously approved of, they appointed Friday, 9th August, 1799, for perambulating and riding the marches and territories of the burgh as described in the Charter, and the inhabitants and all persons who have any interest therein were invited to attend after due notice had been given by the Provost.

On the day appointed over 60 persons attended, and they perambulated the ancient marches and boundaries of the territories of the burgh, and a copy of the Charter granted by King James the Sixth was read publicly by the Town Clerk at the different places described therein as the boundaries of the burgh, and no person having appeared to obstruct or dispute any part of the boundaries so perambulated pointed out by the persons present and described in the Charter, the Provost took instruments thereupon in the hands of the Clerk.

On 16th March, 1802.—At a meeting, held on this date, it was enacted that no person shall carry on any public trade or merchandising or any business in the way of traffic until he or she

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shall first become a burgess by purchasing from the Magistrates a burgess ticket, at the rates hereafter mentioned, that is to say, every person who is the son of a Burgess or married to the daughter of a Burgess shall pay the sum of ten shillings and sixpence, and every other person shall pay the sum of £1 10s sterling, besides sixpence for each ticket for the dues of registration, but always reserving liberty to advance the rate of tickets as the Council may judge right.

On 22nd February, 1806.—The Town Council resolved to revise the customs of the burgh for the following reasons: Considering that the Customs of Burgh have been for a long time by-past collected upon the principle that was formerly laid down by our predecessors in office, when the value of money at that time was of a greater value than now, therefore the said Council, being moved with sundry good intentions, and especially with a view of advancing the revenue of the burgh and preserving the ancient powers granted to it, do hereby resolve to advance the rates of customs upon certain commodities, and to continue the rates of customs in others.

11th November, 1809.—An entry in similar terms to the following occurs each year in the minutes recording the rouping of the Burgh Customs: Same day the seat in the Church was also exposed to roup, when George Burgess in Boglehole was preferred at the rent of twelve shillings and sixpence sterling, from Martinmas, 1809, till Martinmas, 1810 years

In explanation of this entry the Town Council in 1731 agreed to erect a seat or loft in the Parish Church for the accommodation of the Magistrates and Town Council, and the surplus seats were let each year to the highest bidder, who by sub-letting would no doubt recoup himself for the rent paid by him.

As evidence of the extent of the pork markets formerly held in the burgh, it may be noted that in 1812 the dues arising from the weighing of the swine for one year, being put up to public roup, were let for the sum of £2 2s.

2nd January, 1817.—The meeting, taking into consideration the trouble and expense the Bailies have sustained in going to Edinburgh by order of the Court of Session to answer for an error they committed in delaying for twenty hours in taking the oath of Captain James Brown, a pensioner in the Tolbooth, under a process of cessio bonorum, the Court having found expenses due

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to Captain Brown to the amount of £23 15s, which, with £6, the expense of the said Bailies' journey to Edinburgh, the meeting agreed to instruct the Treasurer to pay the sum of £29 15s as above stated.

Coming events cast their shadows before. On 16th November, 1821, the Magistrates, in accordance with previous instructions, gave in a report to the Council showing the total indebtedness of the burgh to be £2023. They stated that the whole of the debts specified were borrowed upon the credit of the revenues of the town, and faithfully applied for the town's use and behoof in the payment of the town's former debts, with interest and other charges to which the town was subjected. They unanimously declared the whole of the sums reported to be debts due by the burgh, and payable out of the properties and revenues thereof.

At a meeting held on 11th January, 1822, the Provost reported that he and other acceptors of a bill due by the burgh to the Affectionate Society of Lochmaben had been served with a Charge of Horning following upon a Durett, and also that a summons had been served upon them at the instance of other creditors. It was resolved in these circumstances to call together the burgh's creditors and lay a statement of affairs before them.

16th April, 1822.—The Magistrates and Council, taking into consideration that the burgh has been led into many embarrassments from the Town Clerk not residing within the burgh, it was agreed that he should be informed by the Depute Clerk that unless he choose to reside within the burgh and afford his professional aid to the Magistrates and Council on all occasions and emergencies, he shall forthwith be superseded and some other efficient professional person nominated to supply his place.

A meeting of creditors of the burgh was held on 2nd May, 1822, but owing to the absence of important books and documents, said to be in the possession of former Provosts and Town Clerks, nothing definite was resolved upon, the Council in the meantime instructing legal proceedings to be taken for their recovery.

On 30th May, 1822, the minute runs that "the Magistrates and Council took into consideration the embarrassed state of the burgh's affairs, and as their case is of a novel kind, they therefore agreed that John Thomson, writer in Lockerbie, should be

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authorised to lay a complete state of the burgh's affairs before eminent counsel in Edinburgh, leaving no stone unturned, and to ascertain whether the Magistrates and Councillors, past or present, in office or dominant burgesses, are liable for the burgh's debts.

A meeting of the burgh's creditors was held on 23rd January, 1824, when a proposal was made that a trust deed should be granted by the Town Council, but the same was rejected by the meeting. The Council authorised an application to be made to the Court of Session for the appointment of a Judicial Factor, several summonses having been served upon the Provost for the debts of the burgh and arrestments used in the hands of the feuars. The debts of the burgh amounted at this date to the sum of £2300. Mr John Graham, tenant in Newbigging, was appointed Judicial Factor by the Court.

At a meeting of the Council held on 3rd July, 1826, the following gentlemen were presented with the freedom of the burgh:—Sir Thomas Kirkpatrick of Closeburn, Baronet; Jas. M'Alpine Leny, Esq. of Dalswinton; John D. Murray, Esq. of Murraythwaite; Captain William Hope Johnstone, R.N.; and John James Hope Johnstone, Esq. of Annandale.

On 16th December, 1834, the following loyal address was presented to King William:—"We, the Provost, Magistrates, and Town Council of the Royal Burgh of Lochmaben, in Council assembled, beg to approach your Majesty at the present crisis of public affairs to express our loyalty and allegiance to your Majesty's person and our unshaken attachment to and veneration for the civil and religious establishments of our country. We humbly convey to your Majesty the expression of our thanks for the firmness evinced by your Majesty in the exercise of your Royal prerogative of choosing the Ministers of the Crown, and we deprecate every attempt at interference therewith, declaring your Majesty's right to be one of the most effectual safeguards of our privileges and a fundamental principle of the Constitution. We humbly convey to your Majesty the assurance of our devoted support in the free and uncontrolled exercise of your Majesty's prerogative, trusting that when the Ministerial arrangements are completed such salutory measures will be adopted as shall best promote the happiness and prosperity of all classes of your Majesty's subjects."

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The Provost was requested to forward the address to the Duke of Wellington for presentation to His Majesty.

These notes may now fittingly be brought to a close. Ruled, as the burgh has been in the past, by men of wealth and position, we would naturally have expected that they would have done their utmost to have preserved intact its extensive possessions, and handed them down to their successors undiminished, in extent or value. The contrary, as we have seen, has been the case, and from being a burgh possessed of a tract of territory of nearly 2000 acres in extent, it has been reduced to the necessity of applying to the courts to be saved from its creditors. The lessons of the past, however, have not been lost upon its existing rulers, and though the present indebtedness of the burgh is exactly double the amount of its liabilities in 1824, we have something to show for our expenditure, which in the not far distant future will help to dispel the sadness which clouds the history of a burgh claiming to be the birthplace of Scotland's greatest hero.

In reply to a question, Mr Rae said he believed this was the first time that these old records had been examined from the earliest period up to the present time. He had not brought the history down later than the bankruptcy of the burgh, but he had stated that a judicial factor was appointed, and that was a gentleman who took everything he could lay his hands on. He wanted to take the right of fishing and other rights in the lochs round about the castle and other lochs, and litigation followed. The courts, however, decided that these rights could not be taken away from the inhabitants of Lochmaben, having been conferred upon them by charter. The only other thing the judicial factor did not take was the customs or fees paid at that time for carts entering the burgh, but, of course, they had not these now. Everything was appropriated. About £150 a year was got from feu duties, and these were all sold. Their common good was of a very small amount, and consisted of some feu duties which they got back and amounting to £5 a year. The Town Council was doing all it could for the burgh. They looked after what property they had, and with the generosity of Provost Halliday and two or three others, he had no doubt that Lochmaben would hold its head up again.

A number of antiquities of the burgh were exhibited by permission of the Town Council of Lochmaben. These included a

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minute book of the Town Council of date 1718, the halberd of the burgh officer, supposed to be an old battle axe; four hundred silver coins found last year during the excavations in connection with the sewage operations, jougs used on those sentenced to "durance vile" in the old days, and articles made from black oak found in the Castle Loch. Some conversation took place with regard to the finding of the black oak. The Chairman stated that he believed there was a crannog, but the matter had never been really gone into, though it was deserving of being investigated. Bailie Lennox said he had taken soundings of the loch, and had drawn stabs out of the part where there was believed to have been a straight way at one time. Some of the wood was only two feet below the surface of the water, at a point half-way between the landing stage and the castle on the shore side. Mr Service said there was no doubt that there was a path-way such as had been referred to, and he believed that it was of the same character as the other crannogs in the district.

THE VENDACE. By ROBERT SERVICE, M.B.O.U.

The only member of our Vertebrate Fauna that we can claim as our very own is the interesting fish that is the subject of this short communication. The Natter Jack Toad is not quite so familiar as one of our local institutions though we have it here fairly commonly, but then we have to share it with some other, few and far between, localities in Great Britain. For nearly a whole century we had one absolutely unique local species that had never been found anywhere else. This was the Coluber Dumfriesiensis, or "The Dumfries Snake," of which a specimen was said to have been taken somewhere in our neighbourhood by a Mr T. W. Simmons, and described by Sowerby as a new species. So it remained, no other specimens turned up, and the identity of the "Dumfries Snake" was becoming more than questionable, when Mr Boulenger, of the British Museum of Natural History, discovered that after all there had been some curious blunder, or transposition of specimens, and that the "Dumfries Snake" was a Central American species.

This, however, is a digression. We have no Vertebrate that is absolutely confined to our own faunal area. The Vendace comes marvellously near to the desired "parochialism," how-

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ever, for it is confined to the Lochmaben group of lochs and their water system, with the exception that it is also native to Windermere and Bassenthwaite. (See meeting at Lockerbie in Febr. 24).

So far as I know the Vendace is first noted from the scientific point of view by Sir Robt. Sibbald in his "Scotia Illustrata," published in 1688. It was called by him Vandesius and Geoandesius, these being Latinised expressions of the names then current for it. Pennant, in that interesting old sketch of Caledonian Zoology, which he wrote in 1773, and prefixed to Lightfoot's "Flora Scotica," treated the Vendace as identical with the Gwyniad of the Welsh lakes, and with the Powan of Loch Lomond, an error which held the field for a very long period, although Stewart in his "Elements of Natural History, published in 1817, gives the "Juvangis" as distinct from the Gwyniad and the Powan, treating the two latter as a single species, which they really are. So far as a correct scientific diagnosis is concerned we have to admit that Sir William Jardine was the first to differentiate the Vendace as a species from all others, though Stewart is also entitled, as I have already said, to some credit; but he identified the Vendace with the Sik of Lake Wener, in Sweden. Jardine's paper was published in the "Edinburgh Journal of Natural and Geographical Science" for 1830. I need not discuss in the present connection how this famous fish has had its specific name altered from time to time from "Maræ̈nula" to "Willughbii," and then again to "Vandesius," which last was given to it by a great naturalist and explorer, Sir John Richardson, son of a Provost of Dumfries.

The Vendace is one of the Coregonidæ, a genus comprising nearly 50 species, which are found exclusively along the northern parts of Europe, Asia, and America. The great majority are lacustrine species, a few of them are subject to periodical migrations to the sea, and one of the Continental species, C. oxyrhyncus, is almost as much a marine as a fresh water species. In many instances their distribution is as local as is our own Vendace. In some cases three or more species are found in the same loch. Their headquarters are undoubtedly along the northern parts of North America, where they abound in every lake and river.

In Great Britain we have three species of the genus Core-

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gonus, viz., (1) the Gwyniad (c. clupeoides), which occurs in Lake Bala, in Wales, in Ullswater, and some other of the Cumberland and Westmoreland lakes, where it is known as the "Schelly," and in Loch Lomond under the more familiar name of "Powan;" (2) the Pollan (C. pollan), which is found in some of the loughs of Ireland, notably that of Lough Neagh. The cry of "Fresh Pollan" is said to be quite a familiar sound in the streets of Belfast at certain seasons. The third species is the Vendace. Not one of our three British species has been found elsewhere outside of our islands, nor is ever likely to be. I present the distribution of this genus and its component species as a puzzle in evolution. How did our three British species originate and how may their present distribution be accounted for? Once that problem has been solved the exotic species may be investigated. Some of them live isolated in remote sheets of water, and at depths so great that when chased to the surface by other fish, or brought there by accident, they die at once owing to the pressure of the expanded air in the blood vessels, or by the reduction of atmospheric pressure so inflating the body as to burst the abdominal walls. Let me now leave its congeners and discuss for a little the Vendace itself.

This remarkable fish is found in several of the Lochmaben lochs. Just what are its precise limits of distribution I have never been able to gather definite information upon. The Castle Loch is, of course, its main habitat. One of the many popular, but totally inexact, beliefs in regard to the Vendace, is that it breeds only in the Mill Loch, whence the young fry find their way to the Castle and Broomhill Lochs. I have seen young of the species in the Castle Loch, where it is impossible they could have come from the Mill Loch, so the popular idea is, so far, incorrect. Odd fish have been seen and taken in the Annan, but they do not thrive there, and probably all that thus stray die, or become the prey of other fish. Opinions seem to differ very materially as to the relative numbers of the Vendace now as compared with former times. I am inclined to give weight to the opinion that it has decreased considerably these twenty years past. Eels are larger and more numerous, and so the spawn of the Vendace will suffer, while I am informed that pike have greatly increased. Therefore the adults must have suffered diminution. But, after

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all, the difficulty of arriving at an estimation, not to say a census, of an under-water population, is rather baffling.

In general habits the Vendace resembles pretty much those of the other members of the family to which it belongs. It is a social species, keeping together in shoals. In summer they remain in the lowest depths, during the warmer weather, but on dull or cold days, or rather in the evenings of such days they will rise higher in the water. The spawning period varies a little with the temperature, but is generally at the end of November or early December. Dr Knox, nearly a century ago, made the observation that the females are larger and more numerous than the males. I have often asked if modern observation confirms this, but no one seems to have studied the point. The food of the Vendace has been very well ascertained, and I have been able from time to time to confirm older observations of their feeding preferences by examining their stomachs, although they very seldom contain anything at all. Such as there is has been found to comprise the Micro Crustacea and Entomostraca almost exclusively. The largest specimens do not seem ever to exceed a foot in length.

One very curious specimen was submitted to me for examination some years ago, which was a union from the shoulders downwards of two fish. There were two vertebral columns and a couple of tails. When newly taken from the water, the Vendace is a very beautiful fish in its clear, pearly iridescence. The upper part is of palest olive, with a slight tint of pink on the pectoral fins and some specks of the same above the lateral line. The most remarkable aspect is the transparence of the skull, through which the entire brain work can be easily seen. The whole appearance of the fish is extremely delicate, and it may be added that the delicacy which it presents to sight is equal to that which the palate claims from the fish when served at table, where its flavour and aroma fully entitle it the character of a luxury.

Most of us remember the Vendace Club, an association of gentlemen who met annually at the lochs in July or August, when the net was drawn, and the fish taken were prepared for dinner in the evening. This club has long ceased to exist, and so also has the St. Magdalene's Vendace Club, an association formed on much more democratic lines than the other. As many as 2000

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people assembled at its annual fishing, and athletic sports were engaged in after the fishing was over for the day.

This article would be incomplete were I to omit mention of the curious legends that linger about Lochmaben in reference to the early history of the Vendace. There are three main stories presented in numerous forms:—(1) That the fish was introduced from the continent by those belonging to some of the monastic or religious establishments of the neighbourhood; (2) that Queen Mary's courtiers brought it with them from France; (3) an introduction by King Robert Bruce, or, as occasionally stated, by one of the James's. All of these stories may be dismissed. The Vendace does not occur on the continent, and so could not have been brought. The name Vendace is undoubtedly French, and as our old Scottish Court was much Frenchified, especially in Queen Mary's time, there may have been a demand for the fish for table on great occasions.

16th February, 1906.

Chairman—Mr ROBERT MURRAY, V.P.

THE KIRK-SESSION RECORDS OF IRONGRAY, 1691-1700. By the Rev. SAMUEL DUNLOP, B.D., Minister of the Parish.

I am sorry to say we have no records of the heroic age of Irongray, when the redoubtable John Welsh was minister of the parish (1661-1681). The times did not lend themselves to such superfluities. It was with swords and pistols and the terrible word of his mouth that John Welsh and his elders wrote parish history, and made it glorious in the annals of the Covenant. If the two curates who succeeded him kept records, they are lost. Perhaps they perished in the rabbling which followed the revolution, or perhaps their successors did not consider such prelatical documents worthy of preservation. From our records we learn that in the neighbouring parish of Lochrutton they were not kept in "the time of the prelacy," as there was "no public record or evidence" of Janet Crokat having given satisfaction for her faults and scandals.

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Our records begin soon after the Revolution Settlement, when Presbyterianism became the doctrine and discipline of the Church of Scotland by law established. They run without a break nearly through the whole of the last decade of the 17th century, from June 11, 1691, till January 7, 1700. They deal with the whole ministry of Mr John Sinclair (1691-1693) and the opening years of the ministry of Mr James Guthrie.

From Scott's "Fasti" we learn that Sinclair was the son of the minister of Ormiston, and afterwards of Delft, in Holland. He was of a melancholy disposition, and given to mathematical studies. From the minutes I can add another piece of information—he wrote a most illegible hand. Perhaps Scott included that too when he mentioned he was a mathematician. At first sight his records look not unlike algebraical problems. During his ministry, in addition to the ordinary cases of discipline, such as uncleanness, swearing, Sabbath-breaking, etc., we have two peculiar sorts of cases before the session—(1) accusations of witchcraft, and (2) confessions of apostasy during the persecution.

WITCHCRAFT.

It is said sometimes that ministers and elders encouraged such accusations, but the Irongray records rather point the other way. Most of our cases are either non-proven or not guilty. They only occur in Mr Sinclair's time. Perhaps Mr Sinclair had a taste for investigating psychical phenomena, and Mr Guthrie had not. Perhaps the people found it was not a fly to which the session of Irongray rose readily. Mr Sinclair was hardly a month in the parish (July 16, 1691) before a namesake of his, Janet Sinklar, was before the session on the charge of slandering Drumpark's wife with witchcraft.

"1691, September 24.—David Muirhead of Drumpark and his wife, being called before the session and examined anent ane strife betwixt them and Janet Sinklar, submitted themselves to the will of the session. Janet Sinklar also submitted to the will of the session for saying that she doubted Drumpark's wife of murder and witchcraft, and is appointed to receive a pul lick rebuke before the congregation."

Simultaneously there was another and more successful accusation before the session.

"1691, August 30.—William Anderson in Hall of Forest,

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being called before the session for bringing his child to a smith to be charmed with ane forge hammer, confessed his sin, and received a rebuke before the session."

At the next meeting William Anderson's wife appeared on the same charge, and stated that she had done so "at the instigation of a travelling woman, whose name she knew not." The smith, too, "being called, acknowledged that his threatening the child with an hammer to be a charm, received a rebuke before the session, and promised never to do the like again."

A smith has always been a suspicious character since the days of Wayland Smith, but some folk-lorist might explain what peculiar virtue lies in a hammer.

Next year, 1692, Janet Kirk appears as a suspect.

"November 13—John Charters in Barncleugh, being called before the session as witness nominat by James Wright to prove witchcraft against Janet Kirk, denied that he knew anything of witchcraft in her. Margaret Smyth, wife of John Jonston, being called before the session, declared in her hearing that Janet Kirk, being brought in to Elizabeth Jonston, being grievously tormented with sickness like to distraction, pronounced these words, that 'if God had taken the health from her let Him given it again, and if the devil had taken it from her to give it her again.' On which she was rebuked."

At the next meeting (November 24) John Charters acknowledged that he had heard Janet Kirk use the words quoted, but gave no opinion as to the witchcraft in them.

An entry on April 16, 1693, promises an even deeper glimpse into Satan's invisible kingdom. "Jean Stot (Ingleston) confessed before the session that she blessed God if Jean Grier's prayings had any pith that they lighted on a kow and not on a person, and did say that Jean Kirkpatrick did gather root grown briers on a Saboth day, and nominat Agnes Patton for a witness."

Here promises to be a witches' Sabbath! Jean Grier's unchancy prayers, Jean Kirkpatrick's root-grown briers gathered on the Sabbath. Surely we have at last a pair of Gallovidian Canidiae. But the sequel proves that the people of Ingleston had been having a neighbourly quarrel. Jean Grier had used rather offensive language about Jean Stot's father David's personal appearance. She had said "he had the face of a devil." The session found "wrath and malice among the

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inhabitants of Ingleston," and the minister was sent as peace-maker. "Jean Stot obeyed the minister and forgave Jean Grier, and also required forgiveness of her, which she refused till further advisement."

This ends our accusations of witchcraft, which are not, after all, very terrifying.

THE LAPSI, OR FALLEN.

Though the persecuting times were ended before these records begin, some distant rumblings of the storm may be heard in them. Since the Decian persecutions, the Church, after a period of trouble, has had to deal with those who in the hour of danger "worshipped in the house of Rimmon" or "bowed the knee to Baal." In early church history these were known as the lapsi or fallen. And there were some lapsi in Irongray.

"1693, February 16.—Thomas Fergusson of Hallhill, younger, before his child was baptised, was rebuked before the congregation for his taking the test (*i.e.*, The Test Act, 1681). March 19—William Smith in Killylour voluntarily compeared before the session and gave evidence of his grief for his defections, acknowledging and confessing his baptising of his child with the curate, and taking the oath of abjuration to be a sin."

The oath of abjuration abjured the apologetical declaration of Rich. Cameron (commonly called the Declaration of Sanquhar), by which Cameron deposed Charles Stuart from the throne.

"April 16—John Maxwell of Beoch came voluntarily before the session and acknowledged his defections, and especially his taking the test, and declared his grief for the same. And Janet Maxwell, his wife, came voluntarily also, and confessed her defections and miscarriages before the courts in the time of persecution."

We shall hear later of some other miscarriages of Mrs Maxwell in Beoch.

Five years after this (in Mr Guthrie's time), August 17, 1698, James M'Morn confessed himself guilty of taking the test, for which he was rebuked and exhorted to repentance.

It is surprising to find so few cases of this kind. Maxwell and Fergusson were heritors or the sons of heritors, and had taken the test to save their lands. The test was only administered to

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persons of position or property. But the oath of abjuration could be administered to anyone by anyone holding a commission from the Privy Council, and to refuse to take it was a capital offence. Many of the people in Irongray must have sympathised with Cameron: and Grierson of Lagg, was their near neighbour, and he was delighted to come over and administer the oath and carry out the penalty if required. It speaks well for the stout hearts of the men of Irongray that so few took it.

On Friday, August 18, 1693, at three o'clock in the morning, Mr John Sinclair, the minister, died—as the records tell us. After his death the parish had no fixed minister till September 13, 1694—more than a year. The minutes tell us, however, the names of the ministers who officiated during the interregnum.

On September 13, 1694, James Guthrie was ordained minister of Irongray. His ministry lasted for nearly 62 years. He died June 8, 1756. There are in my custody some later minutes of the Kirk-Session, which at some other time I may speak of, but to-night I confine myself to his first six years in Irongray. The minutes are evidently in his handwriting, a beautiful, scholarly hand, very easy to read—a great contrast to that of his predecessor's and the session clerk's during the vacancy, James Grierson. Guthrie divided his parish into seven parts, and over each he placed an elder, who was required to report to the session the needs and the misdeeds of his province. It was with one of his elders, however, that Mr Guthrie's first trouble arose.

A TROUBLER FROM URR.

"November 4, 1694—This day the session, finding that William Welsh of Scar is so frequently absent, notwithstanding his being present at sermon, they appoint John Welsh of Cornlie and William Anderson in Shalloch to speak to him upon the head, and to make report next session."

"November 25—Cornlie makes report that he discoursed Scar according to appointment, and that though he apprehends he is a little tainted with Mr Hebron's errors, yet if the minister would discourse him upon the head and inform him about some thing he might be got of from the way to attend the session as formerly."

The minister did discourse him, but had to report failure on December 27. "He finds William Welsh of Scar averse to sit in

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session any more, and gives this reason, that he is most insufficient for such an office, and withal desires liberty for a time to advise, which the minister, in the session's name, granted him."

As far as I can see, Welsh never returned to the session, but he cannot have withdrawn himself altogether from the church, for four years later his daughter Nicolas was baptised by Mr Guthrie.

The interesting person in these extracts was not William Welsh of Scar, but the gentleman of the Scriptural name, Mr Hebron, with whose errors he was tainted. Mr Hebron was the celebrated minister of Urr, John Hepburn, who troubled not only his own and the neighbouring parishes, but the Presbytery of Dumfries, the General Assembly, and the Privy Council of Scotland; and on one occasion made even the valiant burgh of Dumfries tremble within its walls. He was a native of Moray, and had been ordained by an English Presbytery at London. In Episcopal times he had given trouble in Ross-shire—"intruding into the ministry, and thereby debauching weak men and silly women and driving them into rebellion." In 1680 he appeared in Urr, where the curate, John Lyon, was so unpopular that the parishioners broke into the manse and carried off his wife to the hills. In 1689, after the Revolution, he was regularly inducted at Urr, but the wild Hepburn blood did not suit the peaceful times. You remember in Sir Walter Scott's "Heart of Mid-Lothian" the faction to which Davie Deans belonged, "that lovely and scattered remnant, brave and worthy champions of the Covenant, who wadna sae muckle as hear a minister speak, be his gifts or graces as they would, that hadna witnessed against the enormities of the day." Hepburn was such a minister, and there were many Davie Deans in Irongray. Hepburn thundered against toleration in Church and State. He intruded himself into other parishes. He married and baptised in spite of the ministers. At last, in 1696, the Assembly suspended him, but restored him in 1699 on his promising to confine his ministry to his own parish. His promise was disregarded. He was in 1705 imprisoned in Stirling Castle by the order of the Privy Council, and deposed by the General Assembly on the ground of "having neither dispensed the Lord's Supper to others nor partaken thereof himself for sixteen years, and being found guilty of a continuous tract of erroneous, seditious, and diversive doctrines and schismatical courses." In

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1707 he was restored to his ministry at the earnest petition of the parish. He vehemently opposed the Union, and was deep in the counsels of those discontented Cameronians who purposed joining the Duke of Athol's Highland host and overthrowing the Union by force. Hill Burton says he betrayed his confederates to the Government (His. of Scot., vol. viii., 162). In the Fifteen he was a suspected character, for he raised a force of 300 men in Urr and had them under arms. His hatred of Popery was stronger than his objection to the English Government, and they marched to defend Dumfries against Kenmure. The flag they carried is still in Urr Manse, bearing the title "For the Lord of Hosts."

The Hepburnians.

The followers of John Hepburn figure so frequently in our session records that this long account of their leader is necessary.

A lady called Janet Welsh is the next troubler of the peace. She was the daughter of John Welsh in Rigghead, probably some relative of William Welsh of Scar. On July 26, 1695, the session was informed "that she not only continually dishaunts ordinances, but hath gone and caused proclaim herself with Alex. Clark in Terregles parish disorderly without so much as informing either minister or elders in this parish or yet the elders in the parish of Terregles." On September 27 she was cited "pro secundo" for "her irregular and clandestine proclamation and other misbehaviours, having gone to Mr Hepburn (who preacheth at Urr and Kirkgunzeon in opposition, not only to the Presbytery, but to the laws of this Church and kingdom), and is married by him without proclamation or testificat, and is now gone to live in the parish of Terregles with Alex. Clark, to whom she is married." The minister gives also an account that he wrote to Mr Hepburn, and first showed him that she was under a process before the session for several irregularities, and, secondly, that she had never been proclaimed, "only a wicked fellow who had no commission from any but herself or else Alex. Clark had called her name and her present husband's at the church door of Terregles, there being no sermon there upon that day; as also that he had used many arguments to dissuade him from marrying her, notwithstanding all which he hath married her as is alleged. She being now out of this parish, the session thought fit to refer the matter entirely to the Presbytery." What the Presbytery did I cannot tell.

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The next Hepburnian was a neighbour of this wilful Miss Welsh, and he gave the session a good run for their money. He was James Richardson of Knockshinnoch, whose grave is one of the curiosities of Irongray Churchyard. His drama opens in a high heroical style.

A DOUBLE OFFENCE.

"1696, March 30—This day also the session being informed of the sinful, scandalous language and gross misbehaviour of James Richardson of Knockshinnoch, Wednesday last, viz., of his being drunk and wishing that the devil might be in the kirk and among the people of Irongray till he came to be a hearer, and that would be at leisure, and some other such atheistical, wicked expressions. The session appoints their officer to cite the foresaid James to appear before them on Sabbath first."

Sabbath came, but brought no James before the session, but after some delay he appeared and "acknowledged that he had uttered some rash expressions for which he was sorry, and that too much drink had occasioned the samine. Whereupon he was removed and his confession considered, it was thought (fit) to refer the matter to the Presbytery for advice. And he being recalled was told that the session was not ripe anent his affair as yet, therefore desired him in the meantime to consider his sin and his offence, and to labour to lay it so to heart as that he might mourn for it before God, that he might obtain pardon; and that he should be advised of the time when they would have him again to attend."

"April 26, 1696—The session received the Presbytery's advice. 'The Presbytery having heard of the affair of James Richardson, and, considering the disaffection of himself and family to the government of the Church as now established, they advised that he should be sessionally rebuked for his misbehaviour, and if he could be got to enact himself in the session book under such a penalty that he should walk more circumspectly in all time coming that it would be convenient.'"

"May 3—He was rebuked for his scandalous behaviour and sinful words, and subscribed the following articles under penalty of 300 pounds (Scots):—1. That in all time coming he shall walk more holily, righteously, and soberly, guarding against all excess in drinking and passions, taking heed to his words, lest he thereby

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offend either God or man. 2. That he punctually and conscientiously attend upon the ordinances of God, and that in an orderly manner. 3. That to the utmost of his power he endeavour not only his own reformation, but also the reformation of his whole family, and the bringing of them to attend on Gospel ordinances according to God His appointment, and particularly that he shall endeavour the sober and orderly walk of his wife. 4. That he shall neither bring in nor keep in any in his town or mealing who are extravagant in their principles or disorderly in their walk, neither shall he have any hand, secretly or openly, in bringing in any within the congregation who either despise or misregard God's ordinances as here dispensed."

Perhaps the session managed to get his bond and subscription to these articles so easily because in this year 1696 the Assembly had suspended Hepburn from his ministry. Next year, in spite of promises, in spite of his good money, "the session is informed that James Richardson of Knockshinnoch hath suffered his wife to take a child of his to Edinburgh to Mr Hepburn (who is lying under suspension), to be baptised, as also that his wife, Nicolas Gibson, profanes the Sabbath by idleness and despiseth the public ordinances of God's worship." They were cited three times to appear before the session, but proving contumaceous, the matter was referred to the Presbytery. What was the upshot of it all I cannot tell. The Presbytery minutes may afford some light, but ours are silent. If he forfeited his bond, I am glad to be able to say he could afford it, for his Latin epitaph says he was a man of means.

On that same tomb there is a quaint piece of sculpture—a man defending a woman from two dogs or wolves. A local legend says that it commemorates the killing of the last wolves in Irongray by an ancestor of Richardson's. I am inclined to regard it as symbolical of Richardson's defence of his wife against Kirk-session and Presbytery. Does not Dryden in "The Hind and the Panther" represent Presbyterianism under the similitude of a wolf?

DRINKING ON THE SABBATH.

Next year, 1698, another Hepburnian figures in our records. "August 28—This day was delated William Wallat in Casehead (who is an Hepburnian) for Sabbath-breaking, it being a 'fama clamosa' of his sitting in a change house drinking all the last

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Lord's Day save one, notwithstanding he had no necessary affair that called him to be there." After three citations—an Hepburnian always took the full limit of the law—he appeared and "aeknowledged that he was in the change house that Lord's Day that the sacrament of the Lord's Supper was administrat in this place, he being desired by the change keeper to wait in her house (she being at kirk), but denies drinking any; only three of his acquaintances as they went from the church called for a pint of ale, which he drank with them, and for anything he remembers he sold no more that day. The session having considered his confession, and finding that whatever was reported, there could be nothing proven but that he sold ale on that day, thought fit to call him in and rebuke him sessionally for his contumacy, as also his absenting himself from the ordinances, and to take him engaged to observe them in time coming."

He is the last Hepburnian in the minutes, though probably not the last in Irongray.

A BRUTAL RUFFIAN.

A new member of Parliament, I believe, is troubled with the question, "What will happen if the Speaker names me?" A reader of these records may put a similar question, what happens if after a reference to Presbytery an accused person should still prove contumacious? Fortunately, I am in a position to throw some light on that matter, though the offender was not an Hepburnian. There was in Cluden a retired soldier called William Walker, a brutal ruffian, who robbed a certain Helen Walker of her honour; and who, after his offence had been remitted back by the Presbytery to the session to be dealt with, told them "there was no session in Scotland nor minister either should ever make him appear publicly before a congregation, and he neither valued our session nor Presbytery." The session recommended the minister to apply to the magistrate of the bounds to make him obey the sentence. Whereupon the magistrate ordered that William Walker should "be incarcorat untill he gave bond and caution to answer and obey the session's sentence;" which he did, and received "a public rebuke for his insolent carriage and appearance next Lord's Day in the public place of repentance." William Walker appears again in the records, and it is satisfactory

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to know that a sentence of corporal punishment was passed upon him.

SABBATH-BREAKING.

There are, of course, many cases of Sabbath-breaking and working on a fast day in the records of Irongray, but there are two which deserve some notice, one of Sabbath-breaking on principle, the other Sabbath-breaking by proxy. In 1698 the session tried to find out why Jean Douglas in Ingleston did not attend ordinances. After much enquiry they discovered that "she had made ane oath (when the Presbytery had her before them for abusing Mr Sinclair) that she would never hear one of the Presbytery of Dumfries again. Whereupon the session (though they were fully persuaded of the insufficiency of her plea, the oath undoubtedly being unlawful) delays consideration of the matter."

The other case concerns Mrs Maxwell of Beoch, whose "defections and miscarriages before the courts in the time of persecution" have already been noted. Her servant, Susanna Stewart, was accused of having taken on the Sabbath day a horse to Corswado in Lochrutton "and all the furniture wherewith he had harrowed on Saturday on him." She pleaded that she had done so at her mistress's command. At next meeting of the session Mrs Janet Maxwell denied this, till confronted with her servant, who told the session that her mistress had importuned her to say she had done so in ignorance. "Whereupon Janat broke out in many passionate, foolish, and impertinent speeches, and justified the matter as she was able." It was determined to rebuke her, and "put to the vote rebuke her publicly before the congregation or before the session; it was carried rebuke her before the session in regard that she is a little crack-brained, and if she were made to appear before the congregation probably it would make her worse."

"QUIS CUSTODIET?"

Drunkenness was another frequent offence in Irongray. The session itself was not free from this sin. John Edgar, an elder, had to be rebuked "for his unbecoming carriage, viz., his being given a little in excess to drinking when he goes to Dumfries." They thought fit to call him and lay it home to his conscience, "which being done he acknowledged that through the weakness of his head a little ale would discompose him, but that he never

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designed to excess; but because some were offended at him he was resolved in all time coming to be more watchful of himself."

The session was not only careful of the morals of its members, but it defended the honour of its order. In May, 1699, Adam Anderson and his daughter were rebuked for scolding and abusing David Anderson, "one of our number."

THE LORD'S SUPPER.

In our modern session records many entries are concerned with the dispensation of the Lord's Supper, but in these records I can find no trace that it was dispensed at all during Mr Sinclair's ministry, and in Mr Guthrie's six years only twice. In the summer of 1697, new elders having been ordained, a search was ordered "for the cup, tablecloths, and other utensils belonging to the church, because of the sacrament of the Lord's Supper which shortly is to be administrat." The elders reported that after searching for them nothing can be heard of them, only that they were carried away with Mr John Welsh, his plenishing. They had probably been used by him in some of his hillside communions, and perhaps lost in a hasty flight when Claverhouse and his dragoons came upon them. The communion cups in Irongray at present in use were a gift of Mr Guthrie. They are beautiful beaten silver cups, round whose rim is this inscription:— "Thir cups were gifted for the use of the Paroch of Irengray by Mr James Guthrie, who was ordained September 13, 1694, Minr. yr."

COLLECTIONS.

Before I close my paper a word must be said about what is now-a-days called Christian liberality. Judged by our standard, the church collections were very small, but we must remember that money, always a scarce commodity, was very scarce in Scotland in those days. I believe I have read somewhere (I am sorry I cannot verify my statement) that before the Union there was not half-a-million sterling of money in circulation in Scotland. The largest collection recorded in our book was taken on the sacrament of August, 1697; it amounted to £48 3s Scots (£4 0s 3d sterling), and the lowest was 3s Scots (3d sterling). The ordinary Sabbath collection averaged about £1 10s Scots. The favourite coins appear to have been Irish halfpennies and doits. A rix-dollar was once paid as a fine to the poor. The primary use of

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the collection was for the poor of the parish. They usually received at the distribution of funds £1 Scots a-piece. I can discover no hard and fast rule regulating either the allowance or its distribution.

Poor strangers received also from the funds of the church, if fortified with a testimonial from their own parish. Testimonials, too, were required for servants who came into the parish.

"On April 26, 1695, the session, finding that several scandalous and irregular persons use to come from other parishes into this, without any testimonials of their behaviour under the minister's hand from whose parishes they come, did and hereby does appoint that no person shall be reset as a servant in this parish without a testimonial, and intimation hereof be made the next Lord's Day by the minister from the pulpit."

This may seem to us rather inquisitorial, but let us not forget that news travelled slowly in those days, and this was a protection for honest and quiet people against rogues and vagabonds. Dr King Hewison, of Rothesay, regards this as an anticipation of a very useful modern Act of Parliament—the Aliens Act.

Many of the poor distressed strangers who applied for help from the session were from Ireland. It was natural they should come from a "distressful country." It is pleasing to note that though in the 17th and 18th centuries England regarded itself as a dumping ground for needy Scots, at least one Englishman received alms from the people of Irongray.

The session, too, paid for the education of poor children. "A poor scholar," an ambiguous phrase, occurs frequently in our records. The Presbytery enacted that 18s were to be paid out of our poor's money every quarter to maintain two bursars at the college for the session. Another entry tells us that the session spent 2s sterling for a Bible for a poor man. Sometimes a special collection was ordered for a parishioner.

"May 31, 1695—This day John Huntar, cotter in Meikle Beoch, gave a petition wherein he showed that his wife having brought forth twins and not being able to nurse them both, he therefore craved help from the session."

The session granted him a day's collection every quarter while the children were a-nursing. It is pleasant to note the

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congregation were liberal, and gave him for two quarters at least about £3 Scots.

The charity of Irongray went beyond its own poor and the stranger within its gates. At the request of the Synod they collected £2 16s Scots for one Anna Bailie, a distressed gentlewoman in the Presbytery of Lochmaben. They gave £1 Scots to "ane old minister's daughter," 13s Scots to "Jo. Vandaboll, a broken merchant."

One special collection, made in November, 1695, has a very old-world association connected with it. "Collect for the poor slaves in Turkie, £5 1s." Probably for the victims of the Barbary pirates, who in these times ravaged even the coasts of Ireland. Another collection, taken in 1697, brings us in touch with the greatest of modern philosophic thinkers. In 1697 a petition was presented to the session from the Scots congregation in Konigsberg, backed by the Council of Scotland, for funds to build a church. Elders were appointed to go through the congregation and receive the people's offerings, which amounted to £29 Scots. Twenty-seven years later Immanuel Kant was born at Konigsberg. He is said to have been of Scottish descent, as his name implies, and perhaps some of his forbears belonged to that Scots congregation.

In these dry bones of our old parish annals there is not a little humour, not a little pathos. Even the church accounts contribute a help to the imagination to picture what sort of people lived in Irongray more than two hundred years ago. It is pleasing, too, to find that some parishioners to-day can trace their descent back to some whose names appear in the records. Two of the 17th century elders' names still survive with us, Welsh and M'Burnie. Our session records are very human documents; they show there was a great deal of human nature in men two hundred years ago, that they were very like us both for good and for evil, that progress has not made us so very much better or so very much wiser than our fathers, though like Homer's heroes we boast ourselves to be better than they.

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NOTES ON THE TASTES OF BEES IN COLOUR.

The Hon. Secretary read a communication which he had received from Mr J. T. Rodda, Eastbourne, referring to the question of the preference of bees for flowers of a particular colour, and asking for the result of any observations on the subject. The question was raised in an article in the "London Magazine" by Lord Avebury, whose observations pointed to the conclusion that the insects preferred blue flowers. He had called on Mr John Ross, Barkerland, a well-known bee expert, and he was very emphatic in saying they had no preference for blue flowers, and was of opinion that they were guided mainly by the odour. Mr Ross had undertaken to come on some future evening and give them the result of various observations on bees—not from the honey-grower's point of view, but on the natural habits of the bees. On the other side of the question Mr Scott-Elliot had kindly written out the results of his observations, which were entirely against his own and very largely in favour of Lord Avebury's. Mr Scott-Elliot's communication (which follows) was to the effect that bees seemed to have a distinct preference for rich red, purple, or blue flowers. Mr R. Service said his observation was that they went indifferently to any flower whatever which contained nectar. Mr Chrystie mentioned their fondness for gooseberry and apple blooms.

By Professor SCOTT-ELLIOT.

Judging from my own experience, I think that both hive bees and Bombi have a distinct preference for deep purple (aconite colour), rich, strong red (stachys and red clover), and blues (bugle), but the question is a very difficult one to answer.

There are so many factors which confuse and disturb its solution:—(1) Thus in early spring and late autumn, when there are but very few flowers out, the entire insect force available is concentrated on those few, whatever their colour.

(2) In a garden, so many flowers are crowded together and such quantities of insects are abroad that it is by no means safe to take any observations made in a garden as generally applicable.

(3) To understand thoroughly the pollination of any one species, it would be necessary to watch that species in at least ten

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different localities for every hour in every month in which it has a flower open. It is needless to say that this has never been done. Anyone who compares different observations of the same flower will at once see how necessary this is. Muller's observations of the same flower in the Alps and in Germany revealed totally different insect visitors.

Willis and Burkill's observations, Muller's, and my own all showed many different visitors. I am quite sure that any observer who attempted to carry out a perfect series of observations on one flower would discover that many insects visit it whose attentions were never suspected.

There is also the fact as I have tried to show by detailed observations, that flies of a high order of intelligence and who are specialised as insect visitors are very much better pollinators than some of the smaller bees. Their colour sense resembles that of the Hive and Humblebee. 61 per cent. of the 13 flowers visited by Rhingia rostrata, e.g., are blue and red. On the other hand, smaller bees do not show anything like this proportion, for Andrena albicans visited red flowers in the proportion of 13 per cent., and Allantus nothi blue and red flowers in the proportion of 21 per cent.

I think there are materials available to work out the insect tastes statistically. This would be done by taking the colours of flowers visited by all Bombus species and Apis, and arranging them in percentage of flowers visited as I have done with a small number of flowers in my paper on Flower-haunting Diptera. Muller's observations in the Alpen Blumen resting as they do on such an enormous number of flowers, can scarcely be upset by any chance observations and conclusions. He there gives for the tastes of the higher bees 36.6 per cent. white and 63.3 per cent. red and blue.

But if any member of the society would take the available data, Muller's and recent observers', and work them out fully, the result would be a very valuable addition to our knowledge of the subject.

I think, however, a very strong personal opinion is always formed if one takes the trouble to examine the visitors of wild flowers patiently and systematically in their natural habitats. It is very striking to notice the difference between the red Geum rivale with its regular Humblebee visitors as compared with the yellow

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Geum urbanum, which has swarms of miscellaneous insects. When a Ranunculaceous plant becomes highly specialised, like Aconite and Larkspur, then its colour becomes purple or blue and its visitors become select.

It is quite otherwise with orders like Leguminosæ, which are from the beginning set aside for intelligent insect visitors. Very few others would have sense enough to know that there is anything worth getting in them. One must also remember that negative evidence is of no value in this enquiry. The Mignonette, Willow catkins, Hazel, and Lime are all splendid bee or bumble-bee flowers. That does not show that the bees are indifferent to the colour.

Both Mignonette and Lime have abundant honey and very strong scent, and the bee would be attracted to them in spite of the inconspicuous colour. The Willow and Hazel, though not red and blue, are conspicuous at a distance, and what else could a thirsty bee find when they are in bloom?

But most botanists now believe that both flower-haunting insects and flowers have specialised together. As some original open buttercup flower became gradually modified and turned through yellow and red into a rich purple aconite, so its visitors, from being scarcely specialised low grade Hymenoptera, gradually changed into the highly organised, intelligent, and industrious Bumble bees and Hive bees.

I think there can be little doubt that in most natural orders, these species, which are most decidedly and exclusively bee-flowers are, if they differ from the rest, either rich red, purple, or blue. This would confirm the general theory that these colours are of a higher grade, that they have been selected and gradually fixed by heredity. I think most authors admit that the original flower colour was green, yellow, or white.

If one accepts Muller's data as well as Willis and Burkill's, and my own, then the whole theory hangs together and is understandable.

The bees, as we think, prefer or find more conspicuous reds and blues, and by their selecting agency, these colours have in a few cases been fixed in the special Bee-flowers.

I have always felt that this question should be again taken up and a new book written about it. I wish some one present would do this.

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ROOKS' NESTS. By Mrs THOMPSON, "Inveresk," Castle Street.

[This paper was written in 1903 for a friend in Edinburgh, so it refers to the date of nest building that year. This year, 1906, the birds have been building a nest since about the 26th January.]

Having recently come to reside near a rookery, I have been much interested this spring in watching their building operations, and, in consequence of being confined to my room with a cold, had ample opportunity of so doing. The first nest was begun about the 23rd of February, and I discovered that five birds were occupied upon it. First, I noticed three birds in particular, one much larger than the others; he and one of the others always flew away and returned together, and then this larger bird, which I called the architect, perched near and watched the other two building, flying down every now and then to lend a helping hand, and returning to his perch, waited till one flew from the nest, when he always went too. Being interested in all this, I frequently looked to see how they were getting on. It was then I observed two other birds were always sitting close by, one above the other. They looked what I supposed to be young, they and the builders being much smaller than the architect. I thought these two were engaged in pulling down the nest, but, to my surprise, I saw the upper one break off a twig, pass it on to the lower bird, who passed on to the next. This nest took nearly ten days to finish. Latterly, one of the builders never seemed to leave it whilst I watched. Its head popped up now and then, but I imagined it was lining the nest. I must, however, premise that I only watched them at intervals, and not with any idea that my observations would be of any use. Since I have been here a puzzle has been solved also with regard to bird habits, which may be of interest. Before coming here I lived at the Craigs, and the last spring I was there, for the first time, I saw in a grass field at the top of a steep bank below the wood numbers of little bundles of twigs laid crossways on the grass in a straight line, a short distance apart, and I wondered what game the village children could be playing. This drew my attention to the fact that the path I was on had also little bundles of twigs at intervals, and these went on in another direction to another field. The children were not

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allowed in the wood, and I thought it beyond their patience almost to do such work, so I simply knocked them all away with my walking stick, and wondered if they were poachers' signals. Now, however, the mystery is partly solved, for a great many of the rooks have been walking about my garden, and a few days ago I saw a bunch of crossed sticks lying on a walk. No one had been in the garden I knew for a fact, but the next morning they were gone. I immediately thought of last spring, and connected them with the rooks and their nests. We had no rookery in the country, but the rooks came after poultry food, or other birds may do this. I know not, but I should be glad to know more about it. This rookery here may be about two miles from my old home, and there is none nearer. I may mention that the twigs were not very small—some, I am sure, two or three feet long in the wood, but as I remember, those in the open field seemed short, but they were all crossed diagonally.

Mr Service observed that the rooks set about repairing and working about their nests in October; then the severe weather stopped their operations, and they were not resumed until off and on after the New-Year, according to the temperature. Rev. Mr Dunlop, referring to the legend that they begin nest-building on the first Sunday of March, said he was glad to think that Mrs Thomson had cleared the character of such a clerical bird as the rook from the charge of Sabbath-breaking. He knew from observation of the Gribton rooks that they were building their nests now. But he believed they robbed each other of the sticks they had collected for their nests.

24th February, 1906.

SPECIAL DISTRICT MEETING AT LOCKERBIE.

A Special District Meeting was held in the Town Hall, Lockerbie, on the above date, and was largely attended.

Chairman—The PRESIDENT.

NEW MEMBERS.—Miss Wilson, Castledykes, Dumfries; Mr D. M'Jerrow, Solicitor, Lockerbie; Provost David Halliday,

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Lockerbie; Mr James Scott-Halliday, Lockerbie; Mr Abel Wightman, Lockerbie; Mr E. B. Rae, Town Clerk, Lochmaben; Dr T. Wyld Pairman, Hinemoa, Moffat; Mr John Miller, Elmwood, Moffat; and Mr and Mrs W. A. Mackinnel, The Sheiling, Dumfries.

It was agreed to record in the minutes an expression of regret at the death of Mr William Thomson, Kirkcudbright, an honorary member of the society, who had done much good work in furthering its objects.

THE JAVA BEAN. By G. F. SCOTT-ELLIOT, F.R.G.S., F.L.S.

The plant, "Phaseolus lunatus," is a native of South America. It was probably first cultivated by the ancient Peruvians, for in their graves seeds of it have been discovered. It is cultivated in many parts of the world, and under cultivation has changed very considerably. The important point to remember in dealing with all cultivated plants is that they lose their specific characters and become no longer true to type. Thus, e.g., the bitter almond in cultivation loses its poisonous character and becomes the ordinary sweet almond. That is also the case with the Phaseolus lunatus. It is met with in three forms:—(1) Cultivated and domesticated, with white seeds (Lima or Dapple beans). This seems to be quite harmless; it is not even said to be dangerous. Well-known books of reference give no hint as to any dangerous or poisonous character. 2. Semi-cultivated seeds, light to dark brown, with violet hues or purple patches. This is called in Mauritius "Pois Amer." It seems also to be the Burmah bean or Rangoon bean or Paigya. These beans contain small quantities of a glucoside phaseolunatin which furnishes prussic acid when crushed and moistened with water. The amount is, however, exceedingly small; not more than .004 per cent. 3. Wild form known in Mauritius as Pois d'Achery, and also Java and Madagascar beans. Seeds are violet, but there appears to be much range in colour, as Mr Dunstan found dark brown, purple, and light brown seeds in two samples from Mauritius. The amount of prussic acid varies from .09 and .08 per cent. in purple and dark brown seeds to .04 in the light brown. This, of course, 1-10 per cent., calculated on the dry beans, is quite sufficient to condemn the use of these Java and Madagascar

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beans altogether. In Mauritius, where this question is well understood, though they do grow the wild and half-wild kinds as a green crop to increase the nitrogenous contents of the soil, which duty is performed by the Bacteriæ, they simply plough it in and do not allow their cattle to touch it. They well know its dangerous character. The disappearance of the poison under cultivation is explained by Mr Dunstan, director of the Imperial Institute, as probably due to the stimulated nutrition due to an improved environment. The glucoside alluded to is probably used up in making starches or proteids, or, it may be, is never formed at all. As regards the practical side of the question, the use of the wild bean seems to me foolhardy in the extreme. With the knowledge which we now possess of it, there is absolutely no excuse and no extenuating circumstance to anybody who would now employ it. Experience seems to show that the white varieties are harmless. A difference of opinion is possible with regard to the half-wild Burmah or Rangoon beans. I wrote to the Imperial Institute on this matter, and got their reply:—

"Dear Sir,—I am directed by Professor Dunstan to acknowledge the receipt of your letter of the 2nd February, referring to Burmah beans, and asking (1) whether beans represented by the sample recently sent here by you would be safe to use as a feeding-stuff, and (2) whether there is any simple means by which the dangerous properties of such beans or meal of doubtful origin can be removed.

"In reply I am instructed to say that it is impossible to give definite answers to either of these questions.

"A large number of samples of Burmah beans has been analysed by the Imperial Institute during the last few years, and the amounts of prussic acid obtained from various samples have ranged from 0.003 to 0.018 per cent. Whilst the minimum quantity here mentioned would probably be harmless, it is possible that the maximum quantity would be dangerous, but nothing definite can be said on the subject, because no data derived from actual feeding trials are available. It is only possible, therefore, to repeat the advice already given in the articles in the Bulletin of the Imperial Institute, to which you have been referred, that it would be safer to avoid the use of the coloured Burmah beans as a feeding stuff altogether. An article dealing principally with the so-called

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'Java beans,' but also with Burmah beans, is being published in the forthcoming number of the 'Bulletin,' in which this is again being pointed out.

"With regard to your second question, I am to say that exporters of 'Java beans' appear to be aware of the dangerous nature of the beans, and importers in this country have been told by their Java correspondents that the beans can be rendered innocuous by boiling. It is very doubtful whether this precaution is of any real value. When the beans are boiled for a long time the ferment is rendered inactive, but the glucoside appears to remain intact.

"Such boiled 'Java beans' do not, therefore, when ground and moistened, spontaneously liberate prussic acid, but it is impossible to say that the glucoside would not be decomposed with the liberation of prussic acid by the gastric juice in the stomachs of the animals when the boiled beans are eaten. It is also possible that a ferment similar to that existing naturally in 'Java beans' may also exist in other fodders or feeding-stuffs which might be given to the animals along with the boiled beans. If a fodder containing such a ferment were used in conjunction with boiled 'Java beans,' then the latter would be just as dangerous as before, since the added ferment would decompose the glucoside in the boiled beans, liberating the prussic acid.—I am, yours faithfully,

"THOMAS A. HENRY, Principal Assistant,
"Scientific and Technical Department."

Information may be obtained in following papers, etc.:—"Bulletin of Imperial Institute," vol. I., pp. 15 and 112, and pp. 16 and 115; Proc. Royal Society, vol. 72, p. 285; Church Foodgrains of India; Watt Economic Dictionary of Products of India. The forthcoming number of the "Bulletin of Imperial Institute" is to contain a further account of the Java beans.

Mr John Maxwell, travelling commissioner, Gold Coast Colony, said he had experience of all the natives of Africa, and he thought there were no persons that he had come across who knew what was good or bad for feeding stuff better than the natives of Java, Madagascar, and Mauritius. If they imported these beans for feeding purposes into this country, they knew perfectly well that they were not good, and it was the Government's duty to stop the importation.

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Mr Sanders of Rosebank said this was one of the most important feeding stuffs in this country, and it would be well that farmers should be made aware of the defects of the bean.

THE VENDACE. By R. SERVICE, M.B.O.U.

At a recent meeting of this society he had the privilege of reading a paper upon "The Vendace," in the course of which he had occasion to allude to the fact that the Lochmaben folks had not any monopoly of the vendace as was often supposed, because it was also found in Bassenthwaite and Ullswater. A post or two afterwards brought a copy of a paper, reprinted from the current number of the "Annals and Magazine of Natural History." This was by his friend, Mr C. Tate Regan, one of the staff of the British Museum of Natural History at South Kensington, who had been investigating the vendaces from the Lochmaben lochs and the waters of Lakeland. There were found sufficient structural differences betwixt the vendaces of these separate localities to justify the naming of the English fish as a distinct species, under the specific title of "Coregonus gracilior." On the present occasion he did not propose to discuss the structural characters on which the new species was founded, but he wished to congratulate Provost Halliday and the town clerk, Mr Rae, whom he saw present, on the fact that for the first time they might safely assure the good folks of Lochmaben that no one would now dispute with them the sole possession of at least one species of vendace.

SEASONAL MOVEMENTS OF FISHES IN THE SOLWAY AREA. By R. SERVICE, M.B.O.U.

These were in many respects comparable to the migrations of birds, and probably had much in common, although the subject was a very obscure one, upon which little was accurately known. Like the birds, the fishes when migrating moved for the most part in large bodies, and while birds went up to high altitudes to perform their journeys, fish in like manner came from the greater depths to the surface. The reason for this was plain—both the birds and the fishes met with a lessened resistance in the element they respectively moved in. Fishes naturally fell into some four large

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classes, so far as those at least of Great Britain were concerned. (1) Those that were exclusively marine and never left the sea; (2) those strictly confined to fresh water; (3) those that bred in fresh water, but spent a large portion of their lives in salt water, otherwise anadromous fishes; and (4) those that bred in the sea, but spent practically their whole lives in fresh water, or catadromous forms. Of the marine fishes many, perhaps all, and certainly all our British species, performed certain movements of more or less extent. These might only be from deep to shallow water, or vice-versa, or backwards and forwards from where food was plentiful or the reverse. The mackerel was a well-known species that had a rather complicated series of movements, which were only partially understood. Their principal move shorewards took place in early summer, and it was most interesting to watch the shoals of this beautiful and agile fish out on the sunlit sea of early June, leaping and swimming along just under the dancing wavelets. A couple of species of fish of considerable interest to local faunists were the garfish and the saury, both of which were of some scarcity in our waters late in summer. They came in for a week or two and disappeared, and although one could guess, no one could say from actual knowledge whither they came or whither they went. The case of the anchovy was a very peculiar one, of more than usual interest. A good many years ago they were suddenly found in the Solway, off Annan, never having ever been known here before. Within a few days the whole Solway and the adjacent waters were found to be filled with them. Then by-and-bye young anchovies were found in abundance, and since then, anchovies have been of annual occurrence. It is difficult to account for the local history of this fish. Herring were rather capricious and uncertain in their movements. It used to be accepted as an article of faith that these most important fish came in vast shoals from the Arctic seas and encirled our shores, but so far as their Arctic origin is concerned we know better now. They breed within our own waters in suitable depths, and when large enough come nearer the surface in the great shoals with which we are all familiar. Most seasons they enter the Solway from the shoal which lies betwixt the Mull and the Isle of Man. Only within these last few weeks some most unusually large shoals entered Loch Ryan, and kept the fishermen engaged in making big hauls. Cod and haddock had left the Solway to a consider-

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able extent, and were not now seen in the quantities they once exhibited, although these visits were still made late in summer. There was one particular group of fishes that were of much interest to the student of Solway fishes, inasmuch as some of them had occurred on our western British coast, there and nowhere else. This group was composed of species from Mediterranean waters and the Western Morocco coast. They evidently came along with the warm weather and warm water, and were not found until summer was well advanced. The tunny was one of them, and had been taken in the Newbie nets and elsewhere. Both the common bonito and the belted bonito had been secured. The maigre had been added to the list only last summer, and by himself, from a specimen taken at Port Ling. One of the same group was the "John Dory," although much more commonly found than any of the others. And lastly, the swordfish, though a great rarity, was from the same region as the others named.

Of typical fresh water fishes the pike and the perch were familiar examples. These came from the deeper depths of the lochs they frequented to the shallows for spawning purposes at certain seasons. And so also did the vendace, and more especially the charrs of the deep Galloway lochs, which could only be secured in sufficient quantity for potting purposes when they came to the margins of gravel in the autumn months. Of anadromous fishes everyone knew the salmon and the sea trout, and how these fishes ran up the rivers to spawn, and how the young fish had just as irresistible an impulse to seek the sea when they had reached a certain stage of life. But how and where they passed their time in the sea no one had any certain knowledge. Less known forms among the anadromous fishes were the smelt, that little fish with the strange scent of cucumbers or rushes which was so distinctive when they came in the Cree and the Nith and other rivers in autumn. The shad or rock herring was also another of the fish that came into fresh water to spawn. So also was the sturgeon, huge examples of which were annually caught when running riverwards in early summer.

Of the catadromous species the flounder was a familiar species, but the most typical of this group was the common eel, the mystery of whose life-history had now been solved. Once thought to be destitute of sexual organs, the eel was now known with certainty to go down to sea to spawn at great depths. They

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went down in late autumn, and never returned, but the young eels ascended our rivers in vast multitudes in May and June, where they remained till the migrating impulse came upon them in later years.

THE KERR OF MOFFAT: A CAER OR CARR? By JOHN T. JOHNSTONE, Moffat.

The name Kerr is the local appellation of the land immediately bordering the River Annan from its march with the glebe, or more properly now, with the Moffat Railway, and down the Annan to where it is joined by Ellerbeck.

When or who first applied the name may never be known, but it has borne that name for 150 years certain, as on a map which purports to be the "first protraction of the town of Moffat as it stood in 1758, by James Tait," the name Kerr is given. The map itself is more concerned with the plan of the town proper, and, therefore, the course of the River Annan and the plan of the fields around the town are not shown, but the ground bounded by the road to Dumfries and the old road to Carlisle is there marked Glebe, Kerr, and Hammerlands, the Kerr being the open ground on each side of the river, and the Hammerlands the fenced meadows adjoining, now part of the Nursery farm. Personally, I have not seen or heard of any mention of the name earlier than the map, but it is evident it must have been applied long anterior to 1758.

The name Kerr itself, more often than otherwise, may be described as a synonym of the Welsh Caer, a fort, and as such the authoress of a book, published a few years ago, "Upper Annandale—Its History and Traditions," draws a very fanciful and imaginative picture of the Moffat "Caer," and suggests that the Ladyknowe was its site. It is hardly possible to utterly obliterate all traces of an old-time fort and its earthworks with ordinary causes. The Ladyknowe and the grounds around show no trace of any of the features presented even at this day by the numerous forts in Upper Annandale. Dr David Christison, Edinburgh, in his paper given before the Antiquarian Society of Scotland, on "Forts, Camps, and Motes of Dumfriesshire," states that 28 forts are contained within a radius of 3½ miles, and 20 within a radius of a little more than two miles round Moffat. The list

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given in Dr Christison's paper does not contain the name of the Ladyknowe as a fort or even a fort site, nor one anywhere in close proximity to the town. The late Mr John Brown, editor of the "Moffat Times," who was well versed in all our local antiquities, and who was also the author of "Moffat Past and Present," states in that work:—"There is no vestige of any defensive work at Moffat, nor is it on record that there ever was any work of the kind there." To all appearance the Ladyknowe is a natural mound or hillock of ground, similar to dozens of others which are scattered over our holmlands south of the town, and are our equivalents to the kames and drums of other places, the formation of which are well known and understood. These ancient forts were usually placed on high ground, if not actually on the hill-top, the low-lying ground at that time being all undrained, and more or less of a marsh, and it is in this feature of the ground that the key to our problem "caer" or "carr" will be found. Dr Christison in his paper mentions that "car," signifying a fort, is the root of the Welsh caer, but he further states that it has other meanings, and quotes Dr Joyce's car, a rock; and Miss Balfour's Lincolnshire signification, "a swamp bordering a stream." It is a curious coincidence that while writing this paper further confirmation of this Lincolnshire definition was obtained in a story, entitled "Skelf Mary," by Oliver Onions, published in the current "T. P.'s Christmas Weekly." The story deals with the fen country, and the author in his description of the district, mentions "the wreaths and wisps of vapour that crept fantastically over *carr* and mere," and, in another place, in a conversation with the farmer, this occurs: "Ye'll be a arable man; all's *carrs* hereabouts," showing that the land described as carr was marshy and unfit for agricultural purposes.

Professor Veitch (Border History and Poetry) gives—"cors, a bog or fen, common in Cornwall," and further states that there is a Gaelic form—"car," meaning a curve or bend. Mr C. E. Moss, in his paper on the peat moors of the Pennines, etc. (Geographical Journal, May, 1904), gives "carr" as a place name on the Pennines for a "morass." Either Miss Balfour's Lincolnshire definition, "swamp bordering a stream," Professor Veitch's car, "a curve or bend," and the "carr," a morass of the Pennines, give a correct topographical definition of the Moffat Kerr.

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When I was a boy the Kerr was neither more nor less than a swamp, with deep holes in it, which were known to every boy in Moffat as the "Kerr lakes." The Annan, when in flood, has burst its banks so often during my recollection, and flooded these lakes with gravel, that they are now non-existent. However, we require to go back beyond the recollection of even the oldest inhabitant to understand the full force and aptitude of Professor Veitch's "curve or bend," and I have had the privilege of inspecting a map prepared about the same time as the one of 1758. This map is to a smaller scale, but it shows the course of the river and all the fields divided somewhat similar to what they are to-day, and from it we see that the Annan, instead of running in a practically straight course past the town till it joined Ellerbeck as it now does (the course was straightened over 80 years ago), was a river of curves and bends, and one might also say loops, so serpentine was its course, and I have no doubt that it was from these topographical features of the "swampy ground bordering a stream" and its "curving course" that the first inhabitants of the district who called it "car" derived its expressive name. Local pronunciation, when examined, also favours the term "car." To-day in Moffat the surname Kerr is pronounced with the the E soft, as it is spelt, but the pronunciation is so on account of the great intercourse the inhabitants have had, as residents in a popular watering-place, with strangers having in a great measure destroyed the local twang. My own recollection of the pronunciation of the name by some of our old residenters now departed was Karr, and we require to go no further away than the adjoining parish of Crawford to find this pronunciation of the word in full force and vigour at the present time, and I am informed that in Ayrshire it is the same, spelt Kerr, but pronounced "Karr." Perhaps some of the Society's philological experts may be able to throw some further light on the subject. For the fort theory for the name there is absolutely nothing to go upon except the bare name of Kerr itself, while the evidence from the topographical features of either the marshy ground or curving river seem to be conclusive that it is to these features the Moffat Kerr owes the name it has borne for hundreds of years.

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LOCKERBIE IN ITS ORIGIN. By THOS. R. HENDERSON.

Lockerbie, although we cannot claim for it the honour of being an ancient burgh, is nevertheless a place of considerable antiquity. When it was first founded, or when it first received the name it now bears, and thenceforth became a place definite, we cannot tell. Its earliest history is shrouded in the impenetrable mists of the past.

There exists neither British nor Roman camp, nor any memorial of a pre-historic age, from which we might conclude that in ancient days its site was occupied as a settlement, at least prior to the time when a slight rift in the dark cloud of the past allows us a momentary glimpse of its early history. Annan, Lochmaben, and Hutton have each their ancient moat hill; Lockerbie has not. In fact, prior to the time of the Bruces we may, with a reasonable degree of accuracy, conclude that the site on which the town now stands was simply a part of the forest which then occupied practically the whole of the valley of the Annan.

We have one indication, however, and only one, of the origin of the burgh, and that is the name it bears. From the word "Lockerbie" we have to learn what we can, and from the fragmentary information which it implies read the unwritten record of the burgh's early history.

In an ancient document, executed in 1198, relating to a dispute between Adam de Karleolo and William de Brus, we find the name spelt "Locardebi." Dr Neilson, in his essay on "Old Annan," mentions that there was a family of the name Locard, which was for a time represented in the Court of the Bruce, and ultimately took root in Clydesdale. No doubt, this family of Locard would, like that of the Bruce, be Norman, and would occupy at the Court of the latter a position both of influence and favour. It is even within the range of probability that they were related to the Bruce himself.

Now we know that in those days, when might was right, the only method of self-preservation was that of co-operation, and that that system of co-operation was universally in vogue. Self-preservation, we are told, is the first law of nature, and our forefathers were as fully alive to that fact as their descendants have been ever since.

Naturally, then, when a man received from the King, as a

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token of favour or reward, an extensive tract of land with valuable rights and privileges—as did the Bruce—his first anxiety was as to how he could best preserve not only his newly-acquired possessions but the position of dignity and power to which he had attained. These objects he accomplished by parcelling off portions of his possessions among his relatives and friends, who would then become his vassals, and by undertaking to protect them and their belongings against the attacks and depredations of their common enemies. In return, these lesser landlords, together with their servants and dependents, became bound to rally to the standard of their superior in times of war, as also to build a stronghold and maintain order and peace within their own jurisdictions. Mr Cosmo Innes says:—"The common inductive clause for granting charters in feudal times was, of course, *pro servicio suo*. It is often stated that the grant is in reward of service, but most commonly the gift is for service done and to be done, past and future. Along with service is joined homage and fealty—*pro homagio et fidelitate*. From the King, therefore, down to his smallest vassal there was created a succession of positions of superior and vassal, each and all bound together by the common ties of self-preservation, mutual aid, and protection.

Consequently, a summons from the King would set the whole feudal machinery of the country in motion. In this connection we may advert in passing to the views expressed by Sir Walter Scott regarding the numerous Abbeys which were founded by David I. He states:—"It seems probable that David, who was a wise as well as a pious monarch, was not moved solely by religious motives to those great acts of munificence to the Church, but annexed political views to his pious generosity. His possessions in Northumberland and Cumberland became precarious after the loss of the Battle of the Standard in 1138; and since the comparatively fertile valley of Teviotdale was likely to become the frontier of his kingdom, it is probable he wished to secure at least a part of these valuable possessions by placing them in the hands of the monks, whose property was for a long time respected, even amidst the rage of a frontier war. In this manner alone had the King some chance of securing protection and security to the cultivators of the soil."

We now come to the affix bi or by, which forms part of the word Lockerbie, and is Danish. The Danes, who had begun

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their descent on England in 787, obtained a secure footing in the north about the middle of the ninth century. They ravished Northumbria and East Anglia, drove out the Anglican Kings, and put Norsemen in their place. Fresh invasions of the Danes took place in the tenth and eleventh centuries, and from 1017 till 1042 Danish Kings held the Throne of England. These Danes were absorbed in the English people, and learned to speak their language. The region which they occupied is said to have extended along the coast from Norfolk to Northumberland, and in the interior from Northamptonshire to Yorkshire. A considerable number of them settled also in Dumfriesshire. Over a thousand years have come and gone since these Danes were a distinct aliment in our midst, but to this day we can clearly trace their movements in the names of places which wholly or partly are of Danish origin. For instance, for the word "beck," meaning a burn, we have the local place names of Beckton, Waterbeck, Troutbeck, and Greenbeck. From the "garth," meaning an enclosure, we have Applegarth and Tundergarth. From the affix "by," meaning a town or settlement, we have Sibbaldbie and Lockerbie. Again, the term "by law" originally meant a law enforced in a "by" or settlement. The words "gar," to cause, "greet," to weep, "mun," meaning must, and "tine," to lose, are all Danish, and in local use at the present day. We, therefore, see that in this district immediately prior to the Norman Conquest a considerable part of the community was composed of Danes or of those of Danish extraction. When they settled in a part of the country which had no special name, the first thing that would naturally happen would be that that place would for convenience acquire a name, either descriptive of its natural features or otherwise. When they settled in a place, however, which already had a name, we have no reason to suppose that they changed that name. They would simply—as do our countrymen to-day when settling abroad—adopt the name which the place already bore.

The lights, therefore, which we have to guide us in our search through the dark night of the past for the origin of Lockerbie are — that one of the first things the Bruce would do after receiving a grant of the lands of Annandale would be to subdivide them among his relatives and friends, who in return would be bound with their dependents to serve him in his operations both of offence and defence, as also to build and maintain a sufficient

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stronghold; that there were at the Court of the early Bruces a family of the name of Locard; that that family held a position of influence and favour at the Court; that a considerable portion of the community at and prior to the time of the Bruces was Danish; that when these settled in a place the name they gave it was mostly a descriptive one; that the affix "by" is Danish, and means a settlement or town; that it is most improbable the place ever had another name, and consequently that prior to receiving its present name of Lockerbie it was not a place of residence. From these facts and circumstances we infer that Bruce made a grant of the lands round about what is now known as Lockerbie to one Lockard; that Lockard, after selecting a suitable place on an elevated piece of ground lying near the great Roman road and between two lochs—which have long since been drained—built thereon a stronghold sufficient to attract around it for mutual aid and protection numerous less fortunate families who would build for themselves dwellings; that these settlers called the place Lockard's by, meaning Lockard's town or settlement; and that these dwellings which arose around the "by" of Lockard some 700 or 800 years ago, and were occupied in a great measure by Danes, formed the nucleus of this now neat, prosperous, and thriving little town.

Having got thus far, let us now look for a little at the state of civilisation which existed, and the method of husbandry which was followed in those far-off byegone days. In the first place there would be the residence or "bi" or stronghold of Lockard, who would now be installed as Lord of the Manor and the representative in this district of the powerful Bruce. Then there would be the necessary place of defence—this would doubtless be in the form of a peel, which was the type of stronghold then in use. The residence of Lockard would no doubt be within the peel.

The word peel has long been used to signify a tower or stronghold. In fact, the phrase, "Border peel," is more often used to signify a Border tower than the latter phrase itself.

This use of the word Dr Neilson, in his treatise on the word "Peel—its meaning and derivation," shews to be quite erroneous and the outcome of a misconception of its true and original meaning. He states, "The oldest proper examples of the word known to me occur in the accounts of the Scottish Wars of

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Edward First. The first peel on record is that of Lochmaben; the next is at Dumfries."

Regarding Lochmaben he states:—"Edward retiring from Scotland after the battle of Falkirk in 1298 had taken possession of the Castle of the Bruces at Lochmaben, referred to as 'castrum' and as a 'chastel.' That winter a considerable addition was made to its defensive strength, as appears from payments made to English labourers, sawyers, and carpenters (*ad faciendum pelum ibidem*) for making a peel there. The entry as regards the sawyers is (*ad sarranda ligna pro constructione peli*) for sawing wood for the making of the peel. This leaves little doubt that the peel was essentially a wooden structure. Its character is further illustrated by an order issued in November, 1299, to provide for the sure keeping of the close outside the castle, strengthened by a palisade—*custodis clausi extra castrum de Loghmaban palitio firmati*. This passage points with great clearness to the conclusion that the peel was this palisaded or stockaded close, forming an outer rampart extending the bounds and increasing the accommodation of the castle. In 1300 houses had been made in the 'piel,' and in 1301 the 'pele' was unsuccessfully assailed by the Scots. In the writs relative to Lochmaben Castle in subsequent years, very many of them conjoin the peel with the castle, the full name and style of which was *castrum et pelum*. In 1376 payments were made for planks and to carpenters at the new front called *la Pele*, and the entry distinctly contrasts with that which follows for 'stanworke' of the castle itself. So late as 1397 English writs refer to the castle and peel. The nature of the peel of Lochmaben is thus tolerably definite."

"At Dumfries, as at Lochmaben, there was a castle before the peel was made by King Edward in the autumn of 1300. In September Friar Robert of Ulm, and with him Adam of Glasham, and many other carpenters, were busy making the peel which was to be set up round about the Castle of Dumfries. The castle appears to have had thrown round it, some little distance out from the walls, a strong palisade or stockade, beyond which again a large fosse was dug. This palisaded and moated enclosure constituted the peel."

We therefore see that the word "peel" was not used originally to signify a tower, but, as Dr Neilson maintains, was the

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name given to the palisade or strength of wood which was thrown round the castle at some distance from its walls, and is derived from the Latin *palus*, a stake.

As time wore on and brought in its train an improvement in the art of building, as also in the arts of warfare, the castle itself would grow in strength, whilst the peel would diminish in usefulness. Ultimately the peel would disappear altogether, and what remained would be called the peel tower or simply the peel.

What other buildings would be erected within the peel we cannot exactly say. No doubt there would be others, in which not only the women and children, but also the live stock of the village and other movable possessions, could be sheltered and stored during times of seige. In 1542 we read that some Englishmen "sett fyer in a peyll" on Corrie Water in Annandale, and took away with them 30 oxen and cows, 8 horses, 60 sheep, "with mych other insight of howsholde." No doubt, after the alarm was raised, everything that could possibly be either carried or driven would be stored inside the peel for safety. Unfortunately, however, on this occasion the strength of the peel had proved unavailing.

As has been stated, the house of the superior inside the peel would as time went on become a place of greater strength and security, and gradually supersede the surrounding peel, which, as the arts of war progressed, would become of less use and importance. In course of time the peel would wholly disappear.

There can be little doubt, therefore, that the present peel tower of Lockerbie is the modern representative and occupant of the ~~sight~~ of the primitive home of the Lockard, which at first was surrounded by a peel.

This primitive home would be built of wood and wattles, cemented with mud and clay, roofed with branches and thatch, lighted by windows of skin, and floored, not with luxurious carpets, but mother earth in the form of mud and rushes. If the villagers and their chief had mutual interests, they had also their comforts in common, or, we might rather say, their discomforts in common. However, they knew no better, would be as well off as their neighbours, and doubtless content—at least, let us hope so.

At the time with which we are dealing the wild boar and the

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wolf still roamed in the woods around the village, and badgers, wild cats, foxes, and eagles were rife.

The condition of the people under the Bruces, that is, of the masses of the people, was rapidly changing for the better. At one time the poorest of them were known as "villeins," from the fact that they huddled together in vills or villages. They were practically in the position of slaves, bound to serve the owner of the land on which they lived, brought back and punished if they ran away, and changed hands along with the land itself.

The clause in the grant of the lands was "*Cum bondis et bondagiis*"—with bondmen and their holdings and services. Mr Cosmo Innes in his lecture on Ancient Charters says:—"I cannot pretend to distinguish with any accuracy the bondman from the neyf. It is not improbable that the neyf or serf by descent was distinguished from the bond labourer, but we cannot tell to what extent or in what manner."

After the settling of the Bruce in the district the position of matters appears rapidly to have changed for the better. Instead of their being at the constant call of their owner, their services became first fixed and definite, and then commuted to a payment, sometimes, though rarely, in money, generally by a share of the produce of the ground. From being actual slaves they were, through the kindly influences of the Norman customs and methods, transformed into free farmers or freeholders, giving a fixed and definite return for the land they cultivated to the feudal Lord as also rendering military services when required.

The only means by which the people could live was, of course, by cultivating the soil. Lockerbie, therefore, would not then be a collection of houses so much as of small farms. Each house or booth sat in a little croft or toft, extending to perhaps half-an-acre, which was fenced. The rest of the land, whether arable or pastoral, was unfenced, which necessitated constant herding. The land was cultivated on a system of co-partnership. A plough, which was a cumbersome, unwieldy, wooden instrument, required eight oxen to draw it. Each villager possessed but two. One plough, therefore, called into requisition the stock of four husbandmen.

Mr Cosmo Innes, in his "Early Scottish History" (page 188-189), states:—"We must not judge a plough of the monks by our modern notions, or fill it in fancy with a pair of quick-

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stepping horses. The Scotch plough of the thirteenth century (and for three centuries afterwards) was a ponderous machine drawn by twelve oxen, whether all used at once or by two relays, so that for five ploughs they had sixty oxen."

The arable land of each would extend to some 26 acres, which were laid off in rigs. This was known as the runrig system.

The village, no doubt, would possess a brew house, as also a mill, where each would, by the laws of the barony, be compelled to have his corn ground.

A church it would also possess, or at least, there was one in the vicinity. In the year 1124 we know for certain that there existed in Annandale at least three churches—Hoddom, St Mungo, and Dryfesdale. The Church of Dryfesdale was dedicated to St. Cuthbert. The Inquisitis of Earl David in 1116 found that the lands of Dryfesdale belonged to the Episcopate of Glasgow. The Church of Dryfesdale was confirmed to this see by successive bulls of Pope Alexander in 1170 and 1178, Pope Lucias in 1181, and Pope Urban in 1186. The last specifies that the chapel of Hutton belonged to the mother church of Dryfesdale.

There were also numerous chapels belonging to the Knights Templars in the district. One, for instance, stood near what is yet known as the Chapel Well at Beckton, within a mile from the peel. The font of this chapel was, after the suppression of the Order, used as part of the market cross of the town.

Our forefathers in Lockerbie, therefore, even in these far-off days, were not without their spiritual advisers; and, judging from the noble account their children gave of themselves in after years, the seed of the Gospel must not only have been well sown, but sown in rich and fertile soil.

And now my task is finished. I have endeavoured, from what scraps of information I had at my disposal, to give a short account of the condition of things obtaining in our little town when the same was first honoured by Locard—no doubt with the advice of his fair lady—selecting it as the site of their future home.

Border raids and forays, it must be remembered, were as yet unknown. It was not until Edward had besieged Berwick, mercilessly butchered without respect of age or sex some seven-

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teen thousand of its inhabitants and burned the town, traversed the country as far north as Elgin, hoisted the red flag with the three gold leopards on every stronghold, and garrisoned with English every town and castle, that the bitter feelings of enmity and hatred were first inculcated, which were in after years and for centuries to cause such devastation and desolation all along the Borders. After the proud and brutal monarch had gone back to England, poor Scotland lay stunned by the swift and crushing blow which had struck her down. Nearly all the nobles and leading men in the country had been forced to swear allegiance. Wasted by the ravishes of war, the country suffered miserably from famine. Bands of cruel and broken men, bitter of heart and fierce at the abhorred oppression of the Southron, hunted in the forests and mountains living by the chase, and when the chance offered plundering the provision convoys of the English. By thousands of cottage hearths in the dismal winter following brave men in shame and sorrow bemoaned to each other over the untold miseries and the galling scorn which their native land had to endure. It was from this time onwards—and who can blame her?—that Scotland viewed England as her bitterest enemy; and then began between the two countries that system of perpetual robbery and murder which continued unabated for centuries. I simply mention this in passing to recall to you the fact that this system of plunder and reprisal, which ultimately attained such an extraordinary development, did not always exist, and that during the time with which we are dealing the Borders enjoyed for the most part a state of comparative calm and repose. No doubt there were wars between the two countries, but these were infrequent. Abundant warning was given, and the necessary preparations made for the preservation of life and property. During the reign of Lockard, therefore, at least comparatively speaking, the little village flourished and its inhabitants enjoyed prosperity and peace. Money was a commodity scarce, in fact almost unknown, and perhaps it was well. The avaricious passion for accumulating was practically impossible. Each lived by the fruits of his handiwork, and the produce was perishable. If one had too much, rather than waste, his less fortunate neighbour would be welcome to a share. The whole farming operations were carried on on a system of co-operation. Their purpose of living

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together was for mutual aid and protection, and we can therefore understand that the inhabitants of the little village would be knit together by these and other ties into the closest relationship, and would become practically as one family.

BONSHAW TOWER. By Colonel J. B. IRVING.

The Irvings originally came from Ayrshire. When Duncan, afterwards King Duncan I., was appointed King or Prince of Cumberland by his grandfather, King Malcolm II., he took with him several of the Scots clans to the Borders to defend them. With him went the clan of the Erevines or Irvings, under Crine Eryvinus's brother. About 1024 they took up their first habitation upon the river Esk, between the White and Black Esk. There they built their first habitation, Castle Irving, below Langholm. The burn and wood do still carry the name of Irving Wood and Irving Burn. The ruins of the castle existed till the close of the seventeenth century. On the same spot now stands Irvine House, belonging to the Duke of Buccleuch, and inhabited by his chamberlain. From this Castle Irving the eldest of the family acquired by marriage the Tower and lands of Bonshaw. In this Bonshaw Tower, on the right bank of the Kirtle Water, ever since has continued to reside the acknowledged head of this powerful Scots Border clan.

The name Bonshaw, Boneschaw, etc., is derived from schaw, the Saxon for wood or woodland, and bon, the Norman for good or fair. It was written in Latin as Bon-boscum. Sometimes the name was written as it was vulgarly pronounced, as Bonshall or Bonshank.

I do not know definitely when the Tower was built, though there are many rumours. But I think we may fairly conclude that there was a Tower on this spot when we got it about 1024, as we made it our principal residence. Bonshaw is of the usual square shape of most of the Border peile towers. The Tower stands on an almost sheer rocky precipice about 100 feet above the Kirtle Water. In front is a terrace, now armed with six old guns; on the right is a steep ravine with a burn flowing through it and a waterfall. In old days it was possible to surround the place with water. The Tower is built of a mixture of red and white sandstone rock quarried in the ravine a little above the Tower.

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The walls are six feet through in the thinnest place. Over the old yett (or entrance door) is carved the sacred motto in raised letters—

SOLI . DEO . HONOR . ET . GLORIA.

The old iron yett is gone. When James VI. came to the throne in 1603 he had all the iron yetts of the Border towers destroyed to put down the power of the Border chieftains. You first enter a small hall about six feet square, communicating with the old stone wheel stair on one side, and with the old retainers' kitchen on the other. From the covert roof of this hall hangs about eighteen inches or two feet an eight-sided stone, like a vast seal. It has on it, in ancient Hebrew raised letters, I.H.S. in monogram. This is called the Crusader's Stone, and, tradition says, was brought from the walls of the old Temple at Jerusalem by one of the Irvings, who was one of the first crusaders (about 1100), was taken to Rome and blessed by the Pope, and then fixed here. It is supposed to bless everyone of Irving blood that passes under it. You pass on into the retainers' kitchen, which has an arched stone with a hole in the centre, covered with a stone, for the passing up of ammunition to the room above. There is also a big iron hook in the apex of the roof; they say for hanging anyone on the laird had no further use for. In one corner in the thickness of the wall is a gloomy dungeon for prisoners. In the centre of each wall is a large firing hole. Along one wall is a large stone bin, probably to hold salt provisions when in siege. The floor, as well as the walls and ceiling, are of solid stone. Passing again through the wee hall, you enter the wheel stair, the stone steps of which are much worn, though it is in perfect preservation. Up these stairs in 1306 passed King Robert the Bruce when flying from Edward Longshanks. This was the first dwelling in Scotland he entered.

On the first floor you enter the grand hall of the Tower, called King Robert the Bruce's room. It is now used as a library, but the plain solid stone walls are undisturbed. An arched recess in one of the walls forms a small altar or, in old Scots, a wumbry. In one of the window recesses are two stone seats, to fire from in time of siege. In other two window recesses are square stone holes or boxes, to hold ammunition. There is a huge fireplace that would hold half-a-dozen men. Going on up

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the same wheel stair, you come on the next floor to a similar room, with window recesses, ammunition boxes, etc. In one corner is a door leading into a small room in the thickness of the wall to, they say, the head of an underground passage in the rock leading to Robgill Tower, so that they could get water, food, ammunition, etc., in time of siege. Resuming the ascent of the wheel stair, you come to the top floor, which now is used as a billiard room. Here you see the great brown beams that carry the roof, fastened, as of old, with huge oak pegs driven through before the days of nails. A very few more steps bring you to the battlements, from which is a fine view of the countryside. At one end is the flagstaff and an old bell for ringing in the clan in time of danger. At the other end are the crowsteps, from whence the sentry looked out towards the Solway to give timely warning in time of danger. In the centre of each length of wall are two holes overhanging each firing hole, from which hot lead or boiling oil could be poured on an invader's head. There are sixty steps from the ground to the top.

I will now, to conclude, give two or three incidents connected with the history of the Tower. Of course, I could easily give a great many, but this only purports to be a short sketch. King Robert the Bruce in 1306, when flying from the pursuit of Edward Longshanks, came one stormy night to Bonshaw to take refuge, it being the first dwelling he entered in Scotland. When he left he took one of the laird's younger sons, Sir William de Irwin of Woodhouse, and made him his secretary and armour-bearer. He was with him, in all his troubles and prosperities, till his death. The King, when firmly seated on his throne, gave him for his fidelity, in 1323, the castle and lands of Drum, in Aberdeenshire, which the Irvines still have. The original parchment, signed by King Robert the Bruce, is still extant. I saw it when at Drum. Another son of Irving of Bonshaw, Roger de Irwin, was keeper of King Robert's robes.

In 1513, at the battle of Flodden, on 9th September, under James IV., Christopher Irving of Bonshaw commanded the Light Horsemen of the Scottish Army. He fell in the first engagement with all his sons but one, and a very large number of his clansmen. He was succeeded by his son William. Henry VIII. of England, in 1544, sent the Earl of Hereford and Lord Wharton with an army to effect the complete subjugation of Dumfriesshire,

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which was looked upon as offering the chief barrier to the conquest of the kingdom of Scotland. The chieftains and proprietors were obliged to submit, as they were overpowered by numbers. Christopher Irving of Bonshaw and Cuthbert Irving of Robgill continued in arms with those who offered patriotic resistance. In order to avoid submitting to the English, and in hopes of saving Bonshaw, which he could not defend successfully, he made it over to his son Edward (Instrument of Sasine in favour of Edward Irving of Bonshaw, dated June 3rd, 1544, deed amongst the family papers). But the English took Bonshaw and plundered and burned it, and devastated all the Irving lands about the Kirtle.

In a letter to council of King Henry VIII., dated 9th September, 1544, Lord Wharton, describing one of these invasions of the year, says that the troops in their return burned Bonshaw, Robgill, etc., and all the peile towers, steds, and corn in their way.

In the way of this burning, I may say that the Tower was several times pillaged and burned, but it simply meant the destruction of the roof and contents of the place, but not the place itself, as in those days they had no means of rapidly destroying a strongly-built stone building. I think it was Jedburgh that in the days of the Bruce they determined to destroy the fortifications to prevent its falling into the hands of the enemy, and it took a large force of men over three years, and then they had not quite completed it.

In February, 1548, was the battle of Dalswinton, where Christopher Irving of Bonshaw commanded the Scottish Light Horsemen. The Light Horsemen defeated the English and charged through them, but a flank attack later on was disastrous, and ended in defeat of the Scots; 600 being slain or drowned in the Nith, and several principal Barons being taken prisoners. Among these prisoners was Christopher Irrewing of Bonshaw.

Christopher Irving of Bonshaw died 1555. His son Edward, to whom he had made over Bonshaw in the time of the English domination, succeeded him. This Edward Irving was a great and successful warrior.

Having made peace with England in 1550, which lasted to the end of the century, the Border clans started their old feuds and fought amongst themselves. An old heredity feud had long existed between the Irvings of Bonshaw and the Bells and Carlyles. But the greatest of their feuds was with the Maxwells,

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thirty-five weights, each with a distinct value, in use in Ashanti, and the complete set was curious and very complicated, the smaller weights being not larger than tiny seeds. Gold washing was as a rule the work of the women throughout the colony, and each woman was furnished with a small wooden bowl which was filled with the earth. This earth was repeatedly washed with fresh water in the most adept manner, the stones and earth being thrown out by the rapid rotary motion of the bowl, until the gold was cleaned from all the earth. The gold, owing to its weight, sank to the bottom, and the residue was then passed to a smaller bowl, and the process repeated until nothing was left but the grains of gold. Illustrative of his paper, Mr Maxwell exhibited about two hundred gold weights which he collected at various towns and places he visited. He also exhibited the skin of an Adristus, one of the most deadly snakes known, showing the four fangs through which the poison was transmitted. The skins, he said, were sometimes used for making musical instruments, and they were much prized by the Ju-Ju men before the fetish. He showed a native lock very like our padlock, with beads attached, and the medicine of a Ju-Ju man on the back. He was informed that the price paid for this lock to the Ju-Ju men was £1. It was much feared by the natives, and it was believed by them that if the possessor of the lock had an ill-will towards another person, by just turning the lock and mentioning the party's name, he could kill his enemy. He also showed two excellent specimens of Agra beads, and stated that if any of these beads were broken, the Ashanti law required the owner to be paid seven slaves. The value of the beads far exceeded their weight in gold.

During an interval in the proceedings, afternoon tea was supplied to the company, through the kindness of Mr and Mrs Sanders of Rosebank.

At the close of the papers, Mr Sanders proposed a very cordial vote of thanks to the gentlemen who had given the papers. That, he said, was the first meeting the society had held in Lockerbie, and he hoped it would by no means be the last.

Rev. R. Neill-Rae, Lochmaben, seconded, and the compliment was warmly awarded.

The Chairman moved a similar compliment to Mr Cormack and the other local members who had taken such an interest in

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that meeting, and an especially hearty vote of thanks to Mr and Mrs Sanders, for their kindness in entertaining the members.

This was seconded by Mr Arnott, and also heartily awarded.

With the kind permission of Mr Johnstone-Douglas, a number of the company paid a visit to the old Tower of Lockerbie, being shown round by Mr John Laidlaw, Arthur's Place, but owing to the late hour at which the meeting broke up, many were unable to avail themselves of Mr Johnstone-Douglas's invitation.

2nd March, 1906.

Chairman—The PRESIDENT.

GYPSIES. By A. M'CORMICK, Newton-Stewart.

Mr M'Cormick commenced by stating that gypsiologists were all agreed that the gypsies must either have originated from Hindustan, or, at all events, spent many years in that country. Their appearance, similarity to natives of Hindustan, and the preponderance of Hindustani words in Romanes (gypsy language), all conspire to prove that. But he added that there are many gypsiologists who, believing in the testimony of tradition, held that it was quite probable that there might be something in the gypsies' own tradition that they originally hailed from Egypt, and wended their way across Arabia and Persia to Hindustan, where they spent many generations. He explained that, whereas there were earlier references to blacksmiths (or the calderari) than 1417, that is the year on which the first authentic reference is made to Romani-speaking gypsies in Europe.

He described in detail the appearance, manners, customs, and characteristics of these gypsies, and how they acted on their progress throughout Europe, and also how they were received kindly at first and afterwards with undue severity by both municipalities and governments. That part of the lecture was illustrated with slides from Callot's pictures of the gypsies, and also by illustrations showing various types of foreign gypsies.

In a similar manner Mr M'Cormick showed that the first authentic reference to gypsies in Scotland was in 1505, and in

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England in 1529, and briefly summarised their reception, actions, and treatment, pointing out that eventually in both countries many of the gypsies were either banished or hung, merely on account of their being habit and repute Egyptians.

Illustrations were given to depict the various types of English and Scottish gypsies, and the lecturer gave accounts of various interviews which he had had with gypsies and at gypsy camps. He also stated tentatively that, in his view, there were no Romani-speaking gypsies in Scotland before 1505, but that the tinklers were in this country long before that date; and that when Johnnie Faa petitioned the King in 1540 it gave evidence that a fusion had taken place between the Romani-speaking gypsies and the Faa gang of tinklers. That theory, he believed, explained how the tinkler-gypsies had obtained Scotch names, how some of the Yetholm tribe are of fair appearance, why the nobility took such interest in preventing the ends of justice being meted out to gypsies, the early references to gypsies in such traditions as the "slaying of the blackimore" by Maclellan, of Bombie, and also the tradition held by them that they came into Scotland by way of Ireland.

Mr M'Cormick further showed that if tinklers were "de facto" Romani-speaking gypsies, their language would be the same everywhere, and pointed out that the Irish tinklers spoke a language, shelta, which was allied to the shelta spoken by the Highland Gaelic-speaking tinklers, but which was different from the language spoken by all the other tinklers in Scotland. He illustrated that point by showing on the screen the results of inquiries made at various centres throughout Scotland.

He then dealt at considerable length with the characteristics of gypsies, such as frankness and simplicity with friends, their philosophy of life, peculiar superstitions, peculiar marriage and divorce customs, fortune telling, and gratitude.

He stated that it had been said that Meg Merrilees was not a typical gypsy, but maintained that she was a typical tinkler-gypsy of a bygone day, although the language put into the mouths of Sir Walter Scott's gypsies was largely that found in the appendix to the life of Bamfylde Moore Carew.

In conclusion, he spoke also of the gypsies of "Aylwin" and "The Coming of Love," by Mr Watts-Dunton, maintaining that in these books Mr Watts-Dunton had succeeded in combining,

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in a way that no other had, the real, the tragic, and the picturesque characteristics of gypsies. The lecture was illustrated with lantern slides, principally from photographs by Mr M'Cormick.

16th March, 1906.

Chairman—Dr J. MAXWELL ROSS, Vice-President.

NEW MEMBER.—Mrs M'Lachlan, Dryfemount, Lockerbie.

It was agreed to minute the congratulations of the society to the Duke of Buccleuch, a life member of the society, on the anniversary of the conferment of the first Scottish Peerage to the family, this being the date of the anniversary, and the secretary was requested to send the Duke of Buccleuch an extract of the minute.

THE SCOTO-NORSE PERIOD IN DUMFRIESSHIRE. By Rev. W. L. STEPHEN.

The forces which have in the past moulded our national life are the natural objects of study in societies such as this. Many of these old world forces have received adequate study. In the case of the Roman occupation, for instance, there has been no lack of eager, careful, exact students. The traces or relics of that period are sufficiently familiar to us; but with the withdrawal of the Roman legions this country was subjected to a force and an influence which have not been, it seems to me, sufficiently investigated. That influence was the Norse, and in using the word Norse I use it as including the Scandinavian and also in certain points the Danish races. You have, first of all, to appreciate the influence of the Norsemen on Europe before one can sufficiently appreciate their influence on Scotland. The bleak and somewhat grim conditions of life in the desolate regions of the North had sent out a race of men who were fitly nursed for fighting under all conditions. Revelling in "the hazard of trackless ways" they wandered over all Europe. One group, passing across to the east of the Baltic, in course of time set their leader

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upon the throne of a principality which was subsequently to develop into the great Russian empire. Rurik the Norseman laid the foundations of the Russian rule, and his descendants occupied the throne of Russia until the close of the 16th century. Another group made their way along the Mediterranean, actually reaching Constantinople itself, and soon the Eastern capital was face to face with the alternative of a sack or the payment of an enormous indemnity. The association of the Norsemen with the Byzantine capital was to be long continued in the famous Verangian Guard. Returning from the East and glancing at Normandy you find there a settlement of the Northmen, subsequently to be disguised under the name of Normans. That was to be a fateful settlement for England and for Europe. From it was soon to spring the Norman conquest. The colonisation of Iceland was achieved, and there is a growing tendency to accept the theory of the discovery of America—Vinland—as historic. East and West in turn they spread. Turning now more especially to Scotland, we find the Norsemen in the Viking age stepping across, first to the Orkneys, then to the mainland in Caithness, where there were Norwegian jarls or earls for fully four centuries, and then passing westward they established an over-lordship of the Western Isles. Ere long they passed southwards to Dublin, and in course of time founded Norse kingdoms on the coast of Ireland. Crossing to the Isle of Man, they quickly set up a kingdom there, and to-day you have the laws of that island once promulgated from the Tynwald Hill, which, of course, is simply a relic from the days when the Norsemen were in occupation. It is the same name to be found in Dingwall and Tinwald, in Dumfriesshire. From the Isle of Man successive expeditions of Norsemen made their way to the south, ravaging the coasts. The common conception of these Norsemen is that they were pirates and freebooters. Doubtless there were aspects of their expeditions which justified the description. They themselves looked upon the viking's occupation as the only occupation worthy of a nobleman and gentleman. They called themselves sea kings. Later ages have chosen to stigmatise them as pirates. They themselves in the time-honoured way held they were conveying the blessings of a higher civilisation to less progressive races. The Norsemen, having sown their corn in Norway like quiet, respectable citizens, set out on excursions to Scotland. While

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the corn was growing they could put in their time pleasantly and profitably over seas. They promised themselves, in American fashion, "a good time." The Scottish tourist, voyaging gaily to "the land of the midnight sun," is, all unconsciously, reversing history. He can in some degree appreciate the light-hearted attitude with which the Norsemen steered for the open sea. Gradually expeditions became less and less marauding or plundering expeditions, but colonising occupations. That is, they looked forward to settling finally in the country where they landed. But let us return to their occupation of the Isle of Man. From that island their favourite method of excursion was to select a creek or bay into which they might run as carrying them furthest inland. Obviously, such a way of access lay to their ships by the Solway. Soon the dwellers on the banks of the Solway became familiar with the dragon bows of the Norse ships, their streaming raven banners, and their burnished shields hung overside, flashing back again the western rays in lines of dazzling light. It seems to me that the method of the Norse in this invasion was to proceed north and south. I am aware that some of our authorities hold that they settled first in the south. The Lake District of England and Cumberland, of course, is dotted all over with place names of Norse derivation. Whether they settled there first, or whether they settled on the north and south shores of the Solway simultaneously, is a matter of detail. The fact remains that in course of time they found their way into Dumfriesshire. Now, our investigation is so far narrowed down; we began with an outlook upon Europe, then upon Scotland, and now we have traced the Norse to the Solway and Dumfriesshire. What is the evidence on which we may found a well-defined Norse occupation in Dumfriesshire? There remains to attest the Roman occupation—the camp, as in the case of Burrenswark. What remains to attest the Norse occupation? Members of this society are familiar with the remarkable profusion of mounds in this county. Some have been located as British camps, some as moot hills, some have proved very difficult to classify. From that most remarkable of historic documents, the Bayeux tapestry, we learn that the earlier Norman—i.e., Norse—castles were earthen mounds defended by wooden stockading. The stone castle with its characteristic keep, reaching its maximum in a Norham castle, was a much later development. The probabilities are that not a few of the many

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Dumfries artificial earth-heights were the strongholds of the early Norse settlers. Tynwald in all likelihood corresponded to the Tingwall of Manx fame, and from that hill the Norse law would go forth for the south of Scotland, after the fashion sung in the sagas. To pass on to another aspect of our subject—the place names—there is really no room for question. You have the Norse termination, "by" and "bie," in such names as Lockerbie, Netherby, Canonbie; the familiar "holm," as in Kirkholm and Twynholm, scattered all over the county. Then follow such other Norse terminations as "gill" in Middlegill or Caplegill; "rigg," as in Buckrigg or Oakrigg; "fell," meaning a hill, sometimes disguised as a suffix, as in Criffel; "hope," as in Blackshope; "beck," as in Craigbeck; and "thwaite," the Norse word for clearing, in Murraythwaite, recalling the Crossthwaite, near Keswick. All these Norse names are in themselves unmistakeable evidence of a Norse occupation of the district. Those who are familiar with the place names of the Lake district will be struck with the similarity to names there. Take, also, the familiar folk name of Johnstone in Dumfriesshire.

"Within the vale of Annandale
The gentle Johnstones ride;
They ha'e been here a thousand years,
An' a thousand mair they'll bide."

Johnstone is simply the Norse Johansen—to this day the most common name in Iceland, the oldest of the Norse colonies in whose sages we have a perfect mine of wealth in regard to Norse habits and customs. So are Annandale and Iceland curiously linked together. The place-name, Merkland, has a remarkable association. You have there a rather striking relic of the Norse occupation. These Merklands, with their Half Merklands, Two Merklands, Three Merklands, are very significant from a legal point of view. Innes, in his "Scottish Legal Antiquities," in a suggestive passage, emphasises the significance of the Norse system of rental—not classifying by acreage, but classifying by another method of valuation; and he lays it down broadly that the west of Scotland bears the traces of the Norse occupation from this Merk taxation classification, differentiating it from the east coast. That is interesting from another point of view. It means that the Norse were familiar with coinage, that is, they did not wish rent paid in kind or produce. We infer from their famili-

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arity with coinage that they had reached a comparatively advanced state of civilisation. We were all watching the action of Paris just now, and we know that if Paris continues to hoard gold it means war, while if the Stock Exchange quotations show gold is being set free the probabilities are peace. As a fighting race, "soldiers and sailors, too," the Vikings saw that they had the sinews of war fit and ready. They preferred carving their way to paying their way. The sword was fame-giver and land-giver. Large sea expeditions had, however, to be financed. Their naval bills had to be met. Let us now glance at two departments of lowland life—shepherding and fishing—in which we find Norwegian terms presenting themselves. The shepherd in the lowlands of Scotland has a method of reckoning as to his sheep in which the term "gimmer" is employed, as well as "twinter" and "trinter." These are all Norse words, and the last two bear unmistakable traces of the Norse method of reckoning by winters, "twinter" meaning simply two winters, and "trinter" three winters. The more peaceful colonising aspect of the Norse association is brought out by such pastoral memories. Then, with regard to the fishing industry, you have on the Solway the uncommon haaf net. Now, that word "haaf" is really Norse, and with regard to the term for a salmon spear, a "leister," you have again a word that is almost pure Icelandic. Leaving these well-defined traces of the Norse occupation, we come on another piece of evidence—that relating to the tenure of land for pasture or other purposes. The Norse tenure was what is known as udal tenure, as opposed to feudal tenure. Land passed from father to son practically without document. It was at the opposite pole from the feudal system, and, in fact, the effort by Harold to induce the Norse to accept feudalism led to prolonged conflict. The udal system was in force among the conquerors. The conquered possibly held land as Merkland. In the "kindly tenantry" of Lochmaben you have something that has long interested the legal mind. Its origin is usually ascribed to the days of Bruce, but it is not at all improbable that the "kindly tenantry" tenure of land may be a far off relic of the Norse udal tenure. It suggests a remarkable parallel with the "statemen" of the Cumberland shore. Wanlockhead and Leadhills furnish something analagous. We now extend our survey to the literature of the Borders. One clear, outstanding feature of Border

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literature is the ballad. That reaches its climax in the group of ballads associated with Yarrow—the most remarkable group in Scottish ballad literature. Now, in the ballad of the Borders you have action, daring. It has all the Norse qualities of love of adventure. Dr Nansen has singled out as the two characteristics of Norwegians—love of adventure and love of independence. The ballads of the South, curiously enough, as has been shown by Professor Veitch, can be nearly all paralleled with Norse folk songs. In the ballads of Yarrow you have the steady tendency to the place of the duel or the conflict. There has arisen a curious dispute as to who was the far-off unknown singer whose strains first gave the keynote to the music that was to be for ever associated with

"The dowie holms of Yarrow."

Now, the "holm" in Norse history has a peculiar association. The holm was at first an island, and the "holm-gang" was a duel fought on an island. In some cases the combatants were actually tied together, with knives in their hands to fight with, and the last man of "win out." Such were the rude beginnings of trial by combat. The idea of having these combats at first on an island was to prevent interference with the combatants. By-and-bye it became customary to have them beside meadows or rivers with enclosures—the lists—so that onlookers could not get in and the combatants could not get out. It does seem that there is a probability that this mysterious singer might very easily have been a skald celebrating some far-off "holm-gang" or duel, and thus giving the earliest tragic association to "the dowie holms of Yarrow." The association of the sister vale of Ettrick with a modern bard is historic enough, as Professor Veitch has pointed out, even in his name a well-defined Scandinavian title. The physical aspect of the Scandinavian is that of a tall, fair-haired, blue-eyed figure—a type that is to be found all over the south of Scotland, so much so, that a Norse writer has said that in travelling in the north of England and Dumfriesshire you meet, at almost every town, men who might pass as Scandinavians. In Hogg you have many of the characteristics which, for those who take kindly to theories of re-incarnation, might form a possible case for the incarnation of a Norse skald. The mysterious Teribus and teri-odin—chorus of the Hawick Common Riding festival—is a tempting theme in this connection, but we refrain.

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I now pass to a group of words to be found in common Scotch speech, and which I take almost at random. They all betray their Norse origin—"smiddy, reek, nieve, nab, hansel, redd." Those who wish to develop that part of the subject will find abundant material in the list furnished by Professor Veitch, of words common to the south of Scotland, and also by that careful student, Mr Anderson, who has gone over the ground of the Lake district. These are the best lists to be studied, because they have been carefully prepared and collated with the Icelandic. We have now glanced at the characteristics associated with the Border ballad, and also at the associations connected with the less literary form—the more common Scots. I think we see that they render intelligible the verdict of an authority on philology, to the effect that, wherever you get Lowland Scots differing from the accepted English pronunciation, you may be very sure you are near the Scandinavian root. I have already indicated in outline the process of the Norse occupation, and it was in the main pastoral, not a military, like the Roman. Although they were a fighting race, the Norse occupation of our country became, in consequence, peaceful. They elected to make their home here in the south of Scotland. In view of all this, the question rises naturally as to whether or not the ties between Scotland and Norway might not have been drawn much closer. At one point it seemed, indeed, as if the destinies of Norway and Scotland were to be linked for good or evil. At that period Thorfin, son of Sigurd, ruled the whole of Galloway and Carrick, and one gets from that fact some idea of the influence of a Norse chief in the south of Scotland. What put an end to their development of power was (1) that their supremacy in Ireland was broken in the great battle of Clontarf, and (2) that there arose, on the Scottish throne the "Tamer of the Ravens," Alexander. An effort was being made by Hago of Norway to emphasise his claims to the over-lordship not only of the western isles but of other parts of Scotland. That precipitated a long due conflict, and the famous fleet set out from the shores of Norway to argue the claim out. The operations of Harold Fair Hair had already familiarised the people of Scotland with the heavy hand of the Norse, and they contemplated the approach of the Norwegian fleet with gloomy forebodings. The battle of Largs, however, was decisive. We usually regard the battle of Bannockburn as preserving intact our

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national identity. But Bannockburn only paved the way for the close union of the two races that fought against each other. It has been said that the misfortune of Ireland is that she never had a Bannockburn—that if she had, the union with England would have become real. Thus, broadly speaking, we may say that Bannockburn simply made easy and practicable the complete fusion of the two races in the coming centuries. With the victory of Largs, the Norwegian dominion was over, and accordingly that race was no longer to be a factor or force in the development of this country. Largs actually achieved what is claimed for Bannockburn—it preserved the national identity from an outside people. Whether that was a gain or a loss I will leave to you to determine. At any rate, it is certain that at that particular period we did not love England, and that a union with Norway would have been in no way unacceptable to a great part of Scotland. Even after the defeat of Largs, it seemed for a moment as if there was still to be a fusion of the races. The daughter of the Scottish King had married the King of Norway. The Scottish King died without issue. His granddaughter, the Maid of Norway, was the next claimant to the throne. Ambassadors were sent from Scotland for her. Michael Scott, the wizard, was among them, but hardly he, with his weird insight into coming events, could have foreseen that the death of that little girl was to have such disastrous consequences. On the death of the Maid of Norway, Scotland was at once seen by Edward of England to afford an opening for diplomacy, and, through the rival claims for the Scottish throne, Scotland was launched upon the tempestuous sea of the War of Independence. Now, we have in the development of history along these lines indications of the contact of Scotland with Norway. It, of course, has been usual to think of it as well-defined in the north—in the Orkneys, which are practically still Norse, and in Caithness, where the very names of the boys and girls—Sigismund, Lorna—in use to this day, reveal the Norse derivation. But, further south, we find distinct evidences. At Inchcolm you have the graves of the vanquished Norsemen; and, incidentally, it is curious to note as an illustration of the myriad-minded outlook of Shakespeare that in "Macbeth" he refers to the indemnity paid by the Norsemen for the privilege of being allowed to bury their dead on St Colm's Inch. The memorial stones are still to be found there. I have also tried to establish

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the evidence of the presence of the Norse in Dumfriesshire and further south, so that we see that in the north, middle, and south the Norseman had laid his hand. That occupation did not leave so many easily deciphered traces in the way of remains as the Roman occupation did, but it has left traces as well-defined for those who care to investigate them. The more the subject is looked into and analysed, the more it will be seen that there is no lack of evidence. The religion of the Norsemen has been described by Carlyle—full of his study of the early Norse Kings—as "a rude consecration of valour." They were a bold, fearless, daring race. Trickery, cunning, deception were held as an abomination by them; the oath-breaker was regarded as a criminal. The strong man was their hero, and strength was their worship. Metzsche, the Sandow philosopher, so much heard of once, would have assuredly found here his ideal over-man. In fact, it was that characteristic of theirs that kept them for long from being appealed to by Christianity. To the Norseman, as to the modern Metzsche, meekness was weakness, and the old chronicler's satire is deliciously subtle:

In their temples Thor and Odin
Lay in dust and ashes trodden,
And King Olaf sweeping southward
Preached the gospel with his sword.

That was an essentially Norse method of carrying forward the blessings of Christianity. You have in the strong, resolute attitude of the Lowlanders, as defined in their character as well as shown in their physical and mental characteristics, one of the not least important evidences of the Norse occupation—characteristics which were to give the associations of the Borders with thieving and marauding, and which were to mark out the Borderers as, above all things, first-class fighting men. All this may fairly be claimed part of the Norse heritage to the Lowlands of Scotland. A recent Border poet has pictured the warriors of the long-vanished centuries, men who knew the South, revisiting "the glimpses of the moon":

Eerie tramp and horses' tread
Fill forgotten ways,
Breezes whisper overhead
Buried minstrels' lays;

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Soldiers of the legions,
Northern sea kings,
Mediæval knights, Border reivers,
Bustle it bravely side by side.

If the spirits of the departed Vikings ever return to the South, they will find much that is changed, also that time has not wholly obliterated their footprints by the shores of the Solway, where they lived, laughed, sailed, and fought, and made our world. One small glance. This is Friday, a Norse word; yesterday we said Thursday, that is Thor's day; the day before yesterday we said Wednesday, which is Odin's day. Friday, the night on which we are met, is the most popular night of the week in the South of Scotland, I am assured, for marriages, and Frias, the wife of Odin, is the Norse goddess of love. There may be other reasons, economic and social, which dictate Friday as the night of the week for marriages, but I do not think that it is at all a stretch of the imagination to see also an association of that established Lowland custom with the day which in the olden time was sacred to the Norse goddess of love. Now, I have made an effort to sum up generally (1) the influence of the Northern civilisation on Europe; (2) its influence on Scotland; and (3) its influence on Dumfriesshire. I have indicated various lines along which, I think, evidence can be led, and not attempting to exhaust the evidence. The evidence accumulates on all hands when you begin to look into the subject. These are lines, it seems to me, along which the study might be pursued, and the more they are developed the more clearly will be seen that there still linger memorials to attest the influence of the Norsemen in their occupation of the south, not only on place-names, customs, and literature, but, above all, on the lowland physical and mental characteristics, which have produced so many stirring scenes, so many daring and striking figures to play their part in the long-drawn romance of the Scottish Borderland.

THE SALMON DISEASE.

Mr S. Arnott, the secretary, brought up the question of "The Bacterial Origin of the Salmon Disease," referring to Sir Herbert Maxwell's "Jottings of a Naturalist" in the "Scottish Review." In it Sir Herbert said that in matters of natural

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science it is never quite safe to jump to a conclusion even when it lies beyond but a narrow gulf of hypothesis, and no clearer instance of the danger of doing so need be sought than that given by Professor Huxley's diagnosis of the salmon disease. It was in 1877 that attention was first drawn to what was considered a novel epizootic attacking salmon in the Esk and Nith, and destroying many of them. White fungoid patches appearing first on those portions of the fish's skin which are not protected by scales—the head and fin bases—spread rapidly to other parts of the body, became confluent, and produced deep ulcers, generally causing the death of the fish. Huxley satisfied himself and others that the agent in the disease was the minute fungus "Saprolegnia ferax," the same which may be seen in autumn on the bodies of dead flies sticking to the window panes, and closely akin to "Peronspora," which causes the potato blight. He considered that the spores of his fungus, floating in fresh water, attached themselves to living tissues of a fish which had received some external injury, and multiplying rapidly, penetrated to the vital organs. In the year 1903 Mr Hume Paterson announced his discovery that "Saprolegnia ferax" was not the cause of the disease at all, but simply of the mould which grows upon such portions of the flesh of salmon as has been previously "necrosed," or killed by another agent, and this agent was revealed to him in the form of a uncro-organism, now known as "Bacillus salmonis-pestis." So far from this disease originating in fresh water, this bacillus grows well in sea water, where "Saprolegnia" will not grow at all.

Mr Arnott proceeded to say that it was important and interesting to recall that so far back as April 23, 1880, Mr J. Rutherford, Jardington, read a paper to this society upon "Observations on the Salmon Disease," in which he said:—"I have not been able to trace the roots of the fungus beyond the skin that covers the scales. In making a cut into the fish through the fungus, the eye at once is attracted by an inflamed, unhealthy-looking stratum of muscle below the skin, of varying thickness. In one fish that I examined it extended right through to the inside sections of that muscle, and when placed under the microscope were seen to be literally one mass of life—that life being a species of bacteria. . . . As I did most of this work in the winter, when the frost was so hard I took advantage of it to freeze parts of

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fish in the section instrument, and by this means I got some capital sections of fungus, scales, skin, and muscle. I preserved one of these sections, which is a very fine one, showing the forms of bacteria still in and around the muscle. After examining a number of fish, and finding the conditions alike in each, I then began to speculate a little as to the nature of the disease, and the idea at once suggested itself, after what I had seen, that the disease was located in the muscle of the fish; and I also have some idea that when it is really known it will be found to commence in the blood, caused either by the food they eat or by some deleterious solution in the water which passes through the gills, and that the unhealthy, decaying fluid or matter, which will naturally pass off from these bacteria, and exude through the pores of the skin, forms a healthy and proper nidus for the germination of the zoospores of the fungus, which must be in those affected rivers in myriads."

In view of this old record he (Mr Arnott) wrote to Sir Herbert Maxwell drawing his attention to it, and Sir Herbert wrote in reply on 10th inst., saying:—"Mr J. Rutherford evidently had touched the secret of the salmon disease long before Mr Hume Paterson isolated and classified the specific bacillus. It is a great pity that he did not persevere a little further, for the date of his discovery corresponds with the period when Professor Huxley was investigating that very subject, and missed the key to it."

Continuing, Mr Arnott went on to say that Mr Rutherford had discussions with Professor Huxley and Mr J. Stirling, and that his paper further pointed out that "unless there is a predisposing cause, fish will not contract the fungoid part of the disease. . . . I am rather inclined to believe that salt water is not very favourable to the growth of 'salmon ferax,' but, as far as the bacteria in the muscles are concerned, no washing by any solution will affect them."

This matter was of special interest to the society, as showing that one of their members was the original investigator who hit upon what was really at the root of the disease which has caused so much trouble before its discovery.

Dr Ross, who presided, said it might be recalled that this was not the only instance when Professor Huxley, great scientist as he was, went off the rails, but he was a thoroughly honest scientist when he saw himself at any time in error. It was of interest that

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one of the oldest of the members of the society—who was, unfortunately, not able to be with them so often now—had made such a far-sighted suggestion.

EDWARD I. AT SWEETHEART ABBEY.

The following note on the above subject was read from Dr E. J. Chinnock, formerly rector of Dumfries Academy:—

On a former occasion I quoted Archbishop Winchelsea's own words in his despatch to the Pope Boniface VIII. to prove that he and the Pope's Legate met King Edward I. at Sweetheart Abbey on the 27th of August, 1300, and delivered the Pope's command that Edward should abandon his claim to the sovereignty of Scotland. In reading the "Liber quotidianus Contrarotulatoris Garderobae," or the "Daily Book of the Roll of the Wardrobe," for the 28th year of King Edward I., i.e., November, 1299, to November, 1300, I have found the following entries, which prove that Edward's Court was at Douzquer or Sweetheart at the time specified.

1. "Paid to Sir John de Langeford, sent from Gerton upon Flete in Galloway to Carlisle to get money coming from the Exchequer, and bring it to the King to pay thence the expenses of his household and army, for his own expenses, those of Richard de Merewell, and of the others who were in his company, for bringing and guarding the said money, for 15 days, between the 10th day of August and the 24th day of the same month, going to Carlisle as is said before, staying at the port of Skynburness, waiting for a favourite wind, and also returning to the Court at Douzquer (Sweetheart)—£2 6s 0½d."

2. "Paid to Thomas le Convers, valet of the King's chamber, for mending the iron dogs for the King's chamber several times in the present year, by his own hands at Stamford on the 2nd day of May, 3 shillings; and at Douzquer (Sweetheart), in Scotland, on the 25th day of August, 10 shillings—total, 13 shillings."

3. "Paid to Sir John Lestrange, banneret, for his wages and those of his 2 knights and 7 esquires from the 6th day of July, on which his horses were valued in the aforesaid war, till the 23rd day of August inst., on which he retired from the King's army at

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Douzquer (Sweetheart), the first day being counted and not the last, for 48 days, £36."

Note.—For "Oxford" in Dr Chinnock's paper on this subject in last issue read Otford. Otford is near Sevenoaks, Kent, where was a residence of the Archbishop.—ED.

6th April, 1906.

Chairman—Rev. JOHN CAIRNS, M.A., Vice-President.

NEW MEMBERS.—Provost Halliday, Esthwaite, Lochmaben, and Mr D. Manson, Acrehead, Dumfries.

THE HOUSE OF THE MAXWELLS OF NITHSDALE AT DUMFRIES.

By JAMES BARBOUR, F.S.A. Scot.

Elsewhere the writer has endeavoured to show that there were two castles here, namely, the King's Castle of Dumfries at Castledykes and a house of the Maxwells of Nithsdale, which occupied the site of the present Greyfriars' Church, at the head of High Street and adjacent to the spot where the ancient Friary stood. These are referred to and discriminated by the Rev. Dr Burnside, minister first of the New Church and afterwards of St Michael's, 1780-1806, in a MS. history of the town and parish of Dumfries. It was written in 1790 for Sir John Sinclair's Statistical Account of Scotland, and printed in that work in abridged form. Castledykes is called a castle of the Cumyns, the chief residence of the family being Dalswinton, seven miles up the river. We do not know of any authority for this designation; and the Wardrobe Account of the twenty-eighth year of Edward First and the numerous State papers containing references to the castle catalogued by Stevenson and Bain invariably speak of it as the Castle of Dumfries, or the King's Castle of Dumfries. But the more important conclusion affirmed by Dr Burnside is that Castledykes is the castle round which King Edward, in the year 1300, placed a palisade, worked in the forest of Inglewood, and which John de la Dolive and William Arnold de Podio held for the English. That is to say, it is the castle concerned in the war of succession and

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independence, and which Bruce captured after the death of Comyn.

The castle or house of the Maxwells of Nithsdale, with which this paper is concerned, being a family manor place, does not figure prominently in history, but enough connected with later public events and an atmosphere of tragic incidents reveal themselves as to call for brief notice by way of preserving what is interesting relating to the town of Dumfries.

"Near the site of the Old Friary," says Dr Burnside, "stood afterwards a castle belonging to the Maxwells of Caerlaverock and Nithsdale, which in some old charters and seisins belonging to the Duke of Buccleuch is styled a 'Magnum Palatum,'" and, proceeding, he states that so far back as the year 1299 the Crown made a grant of the mote and mote lands to the family. These are the lands on which their castle afterwards stood, but at what time it was first erected does not appear. Later we have more certain information. Robert, fifth Lord Maxwell, 1513-1546, a man of great wealth and high consequence, had the misfortune to fall into the hands of the English at the battle of Solway Moss, 25th November, 1542, when he and other Scots were imprisoned in the Tower of London, and compelled, in order to recover their liberty, to acknowledge Henry VIII. as lord superior of the realm of Scotland; and Maxwell, after protracted resistance, also yielded the castles held by him to the English. These concessions brought Lord Maxwell into collision with the Scottish Government, which he had now to conciliate. For this purpose he made a solemn protestation in his new house of Dumfries for his exculpation, dated 28th November, 1545, representing that he had been induced to give over the castles to the English from fear and danger of his life. We here learn definitely that the Maxwells' house of Dumfries was new in 1545, and doubtless it was built by Robert, fifth Lord Maxwell, remembered as the promoter of the bill for the translation of the Scriptures. In this house of Dumfries Lord Maxwell made his protestation of innocence, and declared himself a loyal subject of Queen Mary. The protestation was accepted, and Lord Maxwell was again received into royal favour, and had his honours and dignities restored to him. But he did not long enjoy the royal favour. Worn out by the troubles through which he had to pass, he died the following year, 9th July, 1546.

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We know little of the character of this castle. In the MS. history of the Maxwell family it is stated that the Lord Maxwell built a castle in Dumfries with a bartizan about the same; and an English officer reporting to his Government anent the defences of the town of Dumfries describes it as a fair house, battled, but not strong.

Robert, sixth Lord Maxwell, died early at Dumfries, 13th September, 1552; and the seventh lord passed away at Hills Tower when only four years of age.

John, eighth Lord Maxwell, afterwards created Earl of Morton, 1554-1593, early joined the ranks of the supporters of Queen Mary, and thereby became obnoxious to Queen Elizabeth, who in 1570 sent Lord Scrope with an army into Dumfries-shire, instructed to lay waste the estates of those who favoured the cause of the Scottish Queen. According to his report to Elizabeth, Scrope "took and cast down the castles of Caerlaverock, Hoddom, Dumfries, Tinwald, Cowhill, and sundry other gentlemen's houses, dependers of the house of Maxwell, and having burned the town of Dumfries, returned with great spoil to England."

How long the castle remained dismantled is uncertain, but in 1580 Lord Maxwell appears again to be resident there.

This eighth lord was imbued with a strain of turbulence in his disposition, which frequently involved him in difficulties; and his castle of Dumfries was threatened, and ultimately taken by the royal troops in consequence of his hostility and disobedience to the Government.

The Regent, the Earl of Morton, desired Lord Maxwell to depart from a claim which he had on that earldom, and being refused, he in 1577 deprived Maxwell of the Wardenship of the West Marches, and installed his rival, Johnstone of Annandale, in his place. After the execution of the Regent, Maxwell was restored to favour, and the Earldom of Morton was bestowed on him. Arran, the Chancellor, next, for personal reasons, attempted to curb the power of Lord Maxwell. On 26th February, 1585, it was ordained by the council that Lord Morton should be denounced his Majesty's rebel for harbouring two of the name of Armstrong, and it was further ordained that he and all other keepers of the Castle of Caerlaverock, the Thrieve, the houses of Dumfries, Mearns, and Goatgellis, should be com-

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manded to deliver them up and to remove themselves and their servants forth thereof within twenty-four hours after being summoned.

An army intended at this time to march on Dumfries against Lord Maxwell was dispersed on account of an outbreak of the plague.

In 1585 an Act of Indemnity was passed in favour of Lord Maxwell; but the same year he again offended. On Christmas Eve, collecting his followers at his Castle of Dumfries, they marched in procession to Lincluden College, where mass was celebrated in ancient form. For this act, the age being intolerant, he was put in ward, but shortly liberated. Again, in 1588, Lord Maxwell mustered his forces to act in concert with the Spanish Armada, when it should arrive, he having advised that the attack on England should be made through Scotland. Of this his cousin, Lord Herries, having warned King James VI., Maxwell was summoned to appear before him, who defiantly replied by arming his castles. King James assembled such forces as he could suddenly bring together, and hastened to Dumfries. Lord Maxwell, who was in his house, received warning of the King's advance only an hour before, and was almost surprised by the royal troops. The gate, however, was held until he had escaped by a postern. Ultimately taken and imprisoned, he was liberated and restored the following year. Lord Maxwell was too able and powerful to remain long in disgrace, and condonation followed every transgression on his part.

A bitter feud existed between the Maxwells and the Johnstones, and the latter clan, having raided the Crichtons of Sanquhar, who complained to the King, Lord Maxwell, as Warden of the Marches, was commanded to see justice done. This congenial task he undertook, and having assembled his friends, marched from Dumfries against the Johnstones, who, being warned, had also made preparation. The clans met in battle on Dryfe Sands, 6th December, 1593, when the Maxwells suffered defeat, and their chief, Lord Maxwell, Earl of Morton, was slain, to the great grief of his followers. He was buried in a vault prepared for him in Lincluden College. The remains of it stand in the middle of the chancel.

This eighth lord is characterised in "The Book of Caerlaverock" as a nobleman of great spirit, humane, courteous, and

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learned; and the beautiful seals illustrated in that work are proof of a refined taste.

John, 9th Lord Maxwell, 1593-1613, brought on himself dire calamity and odium. Having broken prison from Edinburgh Castle, the King, very angry, issued a proclamation that none should harbour him under pain of death. Outlawed and in hiding, Maxwell thought to better his condition by securing the friendship of the hereditary foes of his family, the Johnstones. With that view a meeting took place according to appointment between him and the chief of the latter clan. Maxwell's motive will never be known, but conceivably the meeting with his ancient enemy reminded him of the disgrace of Dryfe Sands and his dead father, and roused in him uncontrollable passion. However that may be, he treacherously shot the laird of Johnstone in the back, who, coming to the ground, shortly expired, exclaiming, "I am deceived. Lord have mercy on me! Christ have mercy on me!"

Lord Maxwell fled to France, where he remained four years. On returning to Scotland he was apprehended, carried to Edinburgh, tried, condemned, and executed, confessing the justice of the sentence passed on him.

The flight to France was the occasion of the ballad "Lord Maxwell's Good-Night." It enumerates the castles his lordship held, and describes Dumfries as "my proper place," that is, my residence or chief residence.

The castle dismantled by Scrope had been rebuilt. Dr Burnside puts the date about 1590, that is, in the time of the 8th lord, who fell at Dryfe Sands. It will be seen that the castle, like the seals of the lord before referred to, evidences artistic tastes—it was highly ornate. Scotland, notwithstanding evil times, had developed a form of architecture peculiarly her own. Glammis and Fyvie are noted examples. Lord Maxwell's Castle of Dumfries may not compare with these in magnitude, but it seems no way inferior in richness of ornamental detail.

The county records furnish evidence showing that the castle was of three storeys, with vaults below; and its architectural character is disclosed by certain typical stones recovered from the walls of the New Church, taken down to make way for the existing Greyfriars' in 1866. Among these are a bold corbel such as is usually found supporting a wall-head battlement; corbels of

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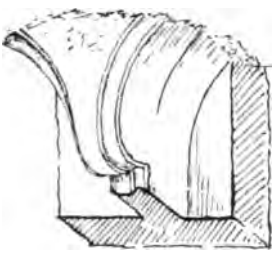

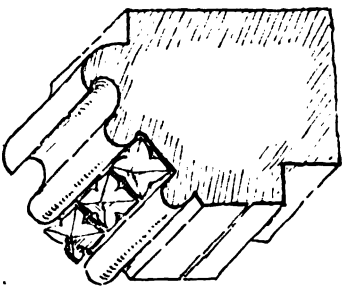

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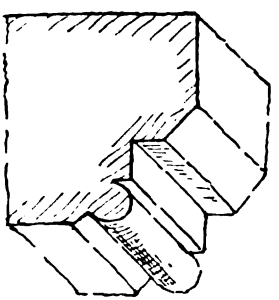

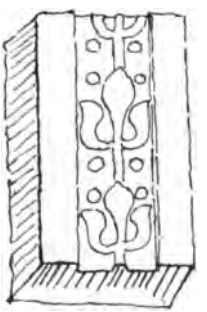

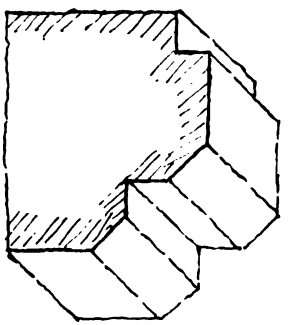

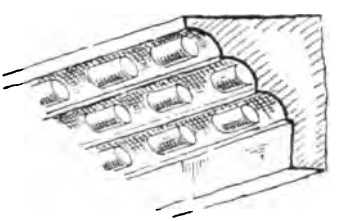

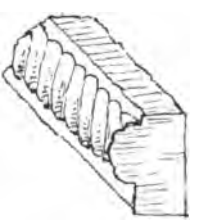

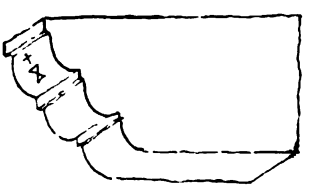

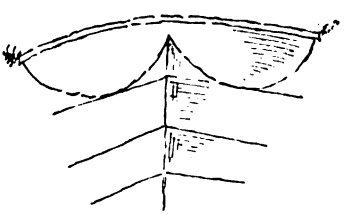

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circular corner turrets; jambs and lintels of wall openings, variously moulded, and enriched in some instances with dog-tooth ornaments; richly billeted corbeling course; cabled strings of various sizes; tapered pinnacles hollowed on the sides and cabled on the angles; and running conventional leaf ornament, which probably framed the panel for the coat-of-arms over the door.

A few stones typical of church work were also recovered, the castle having been partly built of the ruins of the Friary.

The castle was enclosed in a court, had stables and other offices, and extensive and no doubt beautiful gardens, reaching backwards to the river.

Robert, 10th Lord Maxwell, created Earl of Nithsdale, espoused the royal cause during the troubles of the Civil War, on which account this fine manor-place, along with all the other castles of the Nithsdale family, was wrecked. In a claim afterwards submitted by Lord Nithsdale for compensation, they are said as to having been "dismantled and razed."

Robert, 2nd Earl of Nithsdale, "the philosopher," purposed, the house having become unfit for his residence, to have it in some suitable degree repaired. In September, 1659, he appointed John Maxwell of Cowhill and Robert Maxwell of Carnsalloch to ascertain from tradesmen what would be the cost of repairing his house in Dumfries and the garden dykes, with necessary office houses. They ascertained that the expenses would extend at least to £3000 Scots money, and some whom they consulted estimated that the cost would extend to £5000. This scheme does not seem to have gone further.

We are made acquainted with the actual state of the castle in 1675. Correspondence passed between the Privy Council and the Commissioners of Excise of the county of Dumfries relative to the use of the castle for the accommodation of a garrison. On 5th August, 1675, a letter was received from the Privy Council stating that the Council had emitted an Act appointing garrisons to be in divers places, particularly at the Castle of Dumfries, in which there is to be 50 foot and 12 horsemen, who are ordered against the first day of August to be at the said place; and the commissioners are to sight the castle and see that it be made ready. On 25th August report was made by three gentlemen, who had been appointed to examine the castle, that the vaults and second storeys were sufficient. The other two storeys were not

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sufficient, and the roof was not altogether watertight. Withal the first two storeys are sufficient enough for the conveniency of a greater garrison than is appointed. On 14th September report was made by some workmen that £80 (Scots?) would make the roof of the castle watertight. On 3rd January, 1681, a letter from the Privy Council, ordaining a garrison of 30 horse to be furnished at the Castle of Dumfries, was considered. It was recommended to the magistrates to sight the stables and assist in providing what may be useful, and to furnish the high rooms of the castle with beds and dales, and cause the windows to be filled up with divots.

The castle, according to Dr Burnside's MS., was sold by the last Earl of Nithsdale, whose romantic escape from the Tower is well known, before the year 1715, to M'Dowall of Logan, from whom the town acquired the site for the New Church in 1722. The site purchased is described in the Town Council minutes as the foundation of the old castle pertaining to John M'Dowall, younger of Logan, with a large part of the close, and 90 feet square of the castle garden.

This being the castle associated with "Lord Maxwell's Good-Night," we will conclude with a few stanzas of the ballad :—

Adieu, madame, my mother dear,
  But and my sisters three!
Adieu, fair Robert of Orchardstane!
  My heart is wae for thee.

Adieu, the lily and the rose,
  The primrose fair to see;
Adieu, my lady, and only joy!
  For I may not stay with thee.

Though I hae slain the Lord Johnstone,
  What care I for their feid?
My noble mind their wrath disdains—
  He was my father's deid.
. . . . . .

Adieu! Dumfries, my proper place,
  But and Caerlaverock fair!
Adieu! my castle of the Thrieve,
  Wi' a' my buildings there!

Adieu! Lochmaben's gate sae fair,
  The Langholm holm, where birks there be;
Adieu! my ladye, and only joy,
  For trust me, I may not stay with thee.

Authorities: "Book of Caerlaverock," Sir Herbert Maxwell's History, Dr Burnside MS., Mr William Dickie's "Dumfries and Round About."

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THE HONEY BEE: ITS NATURAL HISTORY, ANATOMY, &c. By HENRY MARRS.

Much has been written on the subject which I have the pleasure of bringing before you this evening, and still there is much in dispute regarding seeing, hearing, and smelling in the honey bee. Mr T. W. Cowan, in his book on the anatomy, etc., of the bee, quotes no less than 126 writers on the subject. Much has also been written on beekeeping, and still there is much misconception amongst beekeepers on that part of the subject too. Some time ago a lecturer before the Society of Arts in London said that beekeeping in some parts of England had made no progress during the last 2000 years. This may seem an exaggeration, but seeing that bees are still killed to take the honey it is not so. Columella, a Roman writer on agriculture, who lived nearly 1900 years ago, dealt with apiculture in one of his books, giving instruction on the best situation and management of an apiary, which is far in advance of the methods carried out in some rural districts at the present time, and might almost be an extract from a book on modern beekeeping. But I have been asked to confine myself to-night to the natural history, anatomy, etc., of the bee, which I now proceed to. If we take a hive of bees in June, we will find three different kinds of bees therein. The queen, which is the mother; the drones or male bee, and the workers, which are undeveloped females. These, the workers, were at one time thought to be neuters, but that is not so, they being produced from the same egg as the queen. The male bee is brought into existence at the beginning of summer for the purpose of impregnating the queen, and is destroyed at the end of the swarming season. There is only one queen in a hive, a few hundred drones, and from 50 to 70,000 workers. If the hive becomes too crowded, preparations are made by the bees to swarm. Large cells are formed, hanging downward, something like an acorn in shape. In these cells the queen deposits an egg, which hatches on the fourth day. It is fed on chyle food till the 9th day, when the cell is sealed over, the bee leaving the cell on the 15th day. As soon as the cell is sealed over the queen and nearly all the flying bees leave the hive and form a new colony. On the 15th day a virgin queen hatches, and, if the bees are willing to allow this first-hatched queen her own way, she will destroy, assisted by the bees

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probably, all the rest of the young unhatched queens. On the third day, if weather is suitable, she will fly out of the hive to be fertilised, which, when once accomplished, lasts her lifetime, and rarely leaves the hive again except with a swarm. I say rarely, because some beekeepers maintain that queens do sometimes take an airing flight in the spring, which I doubt. Bees gather nectar from flowers, most single blossoms containing some. This nectar contains a large proportion of water, which is evaporated by the heat in the hive, which never falls below about 60 deg. even in winter. Nectar is cane sugar, but is converted by the bee into the grape sugar or honey by secretion from its salivary glands. Pollen is gathered from flowers, and is used as bee food —propolis also, and is used as a glue for stopping up any air holes in hive. Water is also gathered, but not stored. The eggs laid by the queen are of two kinds. The egg hatches on the third day usually, but sometimes is delayed a little longer, it depending on the temperature. The larva lies at the base of the cell, slightly curved, and as it grows forms a complete ring. The larvæ are fed on chyle food for three days, during which time the food is absorbed by the body as well as the mouth. After three days the food is changed, and honey and digested pollen is added for workers, and honey and undigested pollen for those intended as drones; but those intended for queens are fed abundantly on the same chyle food during the whole of their larvæ existence. It will be noticed that the difference between a queen and worker is a question of food. When the larvæ have grown their full length feeding ceases, and the cells are sealed over with wax and pollen. This is to keep the cell porous and allow the bees to breathe. The larvæ spin a cocoon with silk from the silk glands, which takes one day for the queen, two for the worker, three for drones. Then they all have a period of rest for two, three, and four days. They each take a day to be transformed into nymphs, and the time in nymph state is three, seven, and seven days respectively. The queen takes, therefore, 15 days to develop, the worker 21, and the drone 24 days. It will be noticed that the food is changed at the end of the third day. It is then that the genital organs in female larvæ appear, and if the chyle food is continued, the ovaries are developed. If the food is changed, we have only the rudimentary ovaries. Reproduction without fecundation is called partheno-

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genesis. This was known to exist in some insects 200 years ago, but it was only about 50 years ago that it was known in bees. All eggs which come to maturity in the ovaries are one and the same kind, which, when without coming into contact with the male fertilising germ develop into male bees. Those which are fertilised produce females. If we cross an Italian queen with a black drone, the female progeny will show qualities of the two races, but the drones will be Italians. The drone, therefore, has no father. This was anatomically proved by Siebold, who crushed eggs newly laid, and eggs laid in drone cells were found to be without the fertilising germ, whilst in the eggs found in worker cells the germ was plainly seen. In the head of the worker bee are the compound and simple eyes, antennae, and mouth parts. In the worker the three simple eyes are on the crown of the head. Set in triangular form, they are much the same in the queen, but in the drone the compound eyes are so large that they displace the simple ones, which appear right in front of the face. The antennae, of which there are two, are in the centre of the head of each bee. The mouth parts consist of several organs, of which the most interesting is the tongue. The thorax gives place to the two pairs of wings and three pairs of legs. The abdomen contains the honey sac, true stomach, etc., etc. The compound eyes consist of a large number of simple eyes placed together, with sensory hairs between each facet. There are never less than 3500 in each compound eye. The queen has more, and the drone which has to seek its female many more, displacing the simple eyes entirely. The compound eyes are for seeing at long distance, it being calculated that the angle formed by the lenses enables the bee to see an object of half-an-inch at seven yards. The simple eyes are for short vision, and useful in dark places. Mr Cowan thinks Lord Avebury's experiments not conclusive; they simply show bees can become accustomed to certain colour. Recently a lecture was delivered before the Academy of Science in Paris on the life of bees by Mr Gaston Bonnier, who said: "With respect to the visual powers of bees scientists are not agreed, but after a long study of them had noticed that bees were not attracted by bright and showy colours, but were evidently guided by the scent, which draws them towards those containing nectar." This is exactly my opinion on the subject. The antennae in the worker have twelve separate joints, and near the end

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have sensory hairs. Many scientists maintain that it is in the antennae that the auditory and olfactory organs are situated; others say that organ of smell is in the labrum within the mouth. Cowan thinks the weight of evidence is in favour of their being considered olfactory. There are two pairs of wings, the larger in front, and the bee can at will join the two at each side together, the hind wings having a series of hooklets which fit into a trough in front wings. Bees can fly backwards at a speed of about 12 miles an hour, but I think this can be exceeded. Young bees just hatched cannot fly owing to their trachea not being sufficiently charged with air. The first pair of legs has an arrangement for cleaning the antennae exactly like a comb, and it has also brushing hairs for collecting pollen gathered on the hairs of thorax. The hind legs are provided with a basket for carrying pollen, and also with a pair of pincers for removing wax from the wax plates on the under side of abdomen. The foot of the bee has claws which enable it to hang on to any rough surface. There is also a cushion which secretes a sticky substance, enabling the bee to walk on smooth surfaces where there is no hold for the claws. The abdomen is made up of six imbricated rings of chitine connected by a membrane, which by creasing allows the plates to pass over each other so that the abdomen can be expanded or contracted. There are six dorsal and six ventral plates. Bees do not breathe through the head, but by openings on the surface of the body, called spiracles; they are double, the inner closed with a valve, and the outer, with hairs to keep out dust, lead to large air sacs inside abdomen. There are two pairs of spiracles on thorax, five pairs on abdomen. Spiracles are connected with tracheal tubes, which extend to antennae. Newport says the use of air sacs is to enable the bee to alter its specific gravity at pleasure by enlarging its bulk, and thus rendering it better able to sustain itself on the wing. The ovaries of the queen, of which there are two, are placed on each side of the abdomen—they are tubular glands. Over each side there are about 200 tubes or follicles, each follicle containing about a dozen of eggs, making about 5000 altogether. On the ovary on the right side is the spermatheca, which contains the fertilising spermatozoa. The queen allows the egg to be fertilised or not as the egg passes out of the ovaries. The wax glands are below the ventral plates of abdomen. Wax is a voluntary secretion; yet can only be pro-

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duced at a high temperature, a temperature of 90 degrees being required. This the bees obtain by close clustering. Huber found that bees produced slightly more wax when being fed with sugar syrup than honey syrup. Pollen is not needed in the production of wax, except to make up for wear of tissue, which is great when secreting wax. It is estimated that bees consume from 10 to 12 lbs. of honey to produce 1 lb. of wax, but temperature must influence the quantity used. The way in which bees form the hexagonal cells is said by Mullenhoff to be that of mutual interference, as all circles coming into contact with each other assume that form, and also shows that the cells are like soap bubbles, which if alone are round, but when touching form a wall, and if there are many the centre will be hexagonal. We come now to the sting of the bee. It is formed of a pair of feelers, a sheath, and two lancets having barbs like a fish hook. Attached to the sting is a poison sac worked by a set of muscles which pumps the poison into the wound. The bee first uses the feelers to see if the object is stingable. It then drives in the sheath, and then the lancets, which move alternately or together. The pain of a sting is caused by the poison introduced into the wound, and not by the wound itself, as the sting is only 1.500 in. in diameter, and is driven in to the depth of 1.50 in. While bees die from the effects of a sting, the poison, which is formic acid, can be given them in their food without any ill effects. Formic acid is one of the remedies used in foul brood.

20th April, 1906.

Chairman—The PRESIDENT.

BIRD LIFE AND BIRD PHOTOGRAPHY. By HUGH STEUART GLADSTONE, F.Z.S., &c.

Birds' nests are often built at such a height from the ground that it is difficult to get the lens of the camera to look down into them. It may at times be necessary to climb a neighbouring tree, taking your camera with you, and fixing it as best you can, so as to look down on the nest. Usually, the desired elevation

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can be obtained by lashing three pieces of stick to the legs of your tripod, while you focus from a ladder or from your assistant's back. To photograph the birds themselves, it is, of course, necessary to frighten them as little as possible. Mr Kearton, who may be regarded as the pioneer in this branch of photography, made use of a stuffed bullock, in which he hid with his camera near the nest. He also worked from under the shelter of a stuffed sheep and an imitation rock. Personally, I have not tried these dodges, but I have noticed as incubation advances that the bird's fear of man lessens proportionately as its eggs near the final stages of incubation. Having found the nest of a bird I wish to photograph, I make an imitation camera and tripod out of an old cardboard box and three pieces of stick, and this I place some distance from the nest. Every day I move my "dummy" nearer the nest, till at last it is at the spot where I should like to have my real camera. On the fateful day I substitute the genuine for the false article, I attach thirty feet of india-rubber tubing controlling the pneumatic release of my shutter, and I lie down behind some convenient bush or depression in the ground and am covered over with grass and leaves, and wait for the bird's return. In this way many of our slides have been obtained. The greatest nuisance the bird photographer has to contend with is what is technically termed "movement." There is no dodge for overcoming this, but a lens working at a wide aperture is essential for good results. Mr Legard and I use an Aldis Lens working at F.6, and for nests and eggs employ Edwards' "isochromatic plates," with a plate speed of 56, and for birds Ilford "monarch plates," with a plate speed of 200. The old-fashioned pyro developer, though messy, is still the best, but we have obtained many excellent negatives with other developers. As I have a number of slides to show I cannot now deal further with photographic details, but if there is time at the end of my lecture I shall be glad to answer any questions I can. Throughout the exhibition of these photographs I would ask you to remember that in nature birds' nests, and also the birds themselves, often closely resemble their surroundings, so that in some cases you may have a little difficulty in making out the pictures thrown on the screen.

Our first photograph is of a bird's nest which is probably familiar to most of you. Here we have a blackbird's nest and

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eggs. This picture needs no lengthy description, so we pass to the next.

This blackbird's nest was built in an espalier apple tree trained against a stone wall. The camera and operator were hidden behind a screen of old sacking. Mr Legard, who took this photograph, noticed that the bird in feeding its young had recourse to what is known as "regurgitation."

This picture shows the nest and eggs of our familiar summer visitant, the spotted flycatcher, built in the ivy growing round the porch at Capenoch.

Here we see the spotted flycatcher at its nest.

This slide shows a young spotted flycatcher.

THE PIED FLYCATCHER.

Our next five slides are of considerable interest, for they concern the pied flycatcher, a bird which is extremely local in its breeding haunts as regards Great Britain. I am very glad to be able to say that this bird now nests annually in the valleys of the Scaur and Shinnel. Here we see a view on the river Shinnel. The natural growth of alders afford plenty of nooks and crannies in which the pied flycatcher can make its nest, and the proximity of the river assures the bird of a constant supply of flies and insects. This is a photograph of the actual tree utilised by the pied flycatcher for nesting purposes. The hole shows the entrance to the nest. Oddly enough a convenient hole at the top of the same tree was similarly used by a pair of spotted flycatchers. By carefully removing a portion of the tree we are able to display the nest and eggs. This nest was so badly lighted that with the lens stopped down to 45 an exposure of no less than 135 seconds was necessary. The eggs, as regards size and their pale blue colouration, are not to be distinguished from those of the redstart, and the position of the nests of these two birds is often the same. But in the structure of the redstart's nest it is usual to find feathers, whereas these are not made use of in the nest of the pied flycatcher. Here we see the female pied flycatcher about to enter her nest to feed her young. This photograph was obtained by employing a dummy camera, to which in a few days she became so accustomed that she paid not the slightest regard to the real camera when it was placed in position. This slide shows two pied flycatchers at the nest at the same time, and affords an

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ornithological puzzle. As can be seen, neither of these birds is a mature male. As a matter of fact we often saw the "pater familias," but he would never face the camera. Probably one of these birds is a female which had lost her young, and so, prompted by the feelings of maternity, carried food to a nest where she knew there were eager mouths to fill.

TREE CREEPER.

This slide shows the nest of a tree creeper, built in a loose stone dyke. Usually this nest is made in a crevice of a tree or behind some semi-detached piece of bark. These birds have the peculiarity of always lining their nests with strips of bark, as can be seen. Here we see the tree creeper about to enter its nest. The stiff, stunted tail should be noticed, which, with its two legs, makes a kind of tripod for the bird to rest on when creeping the trees in search of its insect food.

THE LITTLE GREBE.

Our next series of photographs concern the little grebe or dabchick. This bird, I understand, has only comparatively recently taken to nesting in this locality. This photograph is of the Far Loch at Capenoch, where it is now an annual visitant. This year I first noticed it on April 6th. The little grebe is extremely shy in its habits. Its nest is but a floating raft of aquatic plants moored to the surrounding rushes and reeds. On leaving the nest the bird carefully covers up its eggs, so that, as can be seen by our photograph, the nest might often be passed by in mistake for a bunch of weeds. Here we see the nest uncovered. The eggs are newly laid, or they would soon have become discoloured by being so frequently covered over with decaying vegetable matter. When fresh laid, these eggs are of a chalky white colour, which soon becomes stained. When blown, they are of a blue-green colour within. This slide shows the bird on its nest. To get this photograph a dummy camera was placed near the nest for several days in about three feet of water. When the photograph was taken the camera took the place of the dummy, and I hid on the bank as far away as the length of tubing of my pneumatic release would allow. Encouraged by my success, the next day the camera was placed even nearer the nest, with the result shown. On the first sign of danger the little grebe in an

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incredibly short time first covers up its eggs, and then dives straight into the water without leaving so much as a ripple to betray its presence. It then stays with only its head above water near the nest, till it is safe again for it to resume incubation. My audience may be glad to know that this bird successfully reared its brood.

WHITE WAGTAIL.

This photograph of a white wagtail's nest was taken in Iceland by Mr Legard. This bird, though only a rare visitor to our shores, is probably often overlooked on account of its similarity of plumage to our familiar pied wagtail, the nest and eggs of which are indistinguishable. Here we see the bird near its nest. I regret that the photograph does not more clearly show the plumage; but the white wagtail can always be distinguished from the pied by the preponderance of grey on its back, and by the more conspicuous white on its wings.

MEADOW PIPIT'S NEST AND CUCKOO'S EGG.

This nest belongs to a meadow pipit, but contains, in addition to its proper complement, the egg of a cuckoo. Its larger size at once distinguishes it. The parasitic habits of the cuckoo are well known, and upwards of 120 different birds have been known to have been thus imposed upon. In this locality, the meadow pipit would appear to be the most common victim.

RED NECKED PHALAROPE.

Our next four photographs are of the red necked phalarope, an exceedingly rare nesting bird in Great Britain. Owing to the greed of egg collectors, this bird has been almost exterminated from its original nesting haunts on the north-west coast of Scotland. I know of no bird whose habits are more engaging. The female is the more brilliantly plumaged of the pair, and contrary to custom (I should perhaps say bird custom), courts the male. On him devolves the duties of incubation and also the care of the young: the female being content to idly preen herself on some neighbouring pool, without a thought of domestic cares. My photograph was obtained in Ireland. Here we can barely see the nest, hidden as it is by the short herbage of a maritime shore. Without moving the camera, but by pressing down the herbage on either side, we can see the four pear-shaped eggs—the smallest

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pyriform eggs, I believe, that are known: they measure 1.1 by .83 inches. Here the patient male bird can be seen attending to his unnatural duties. No screen of any kind was needed to take this photograph, for the tameness of these birds is past belief, as can be seen by our next picture. Having found some nestlings, and seeing that their parent kept hovering close to our heads, I got my friend to hold a nestling in his hand, and focussed my camera on it. I had only a few minutes to wait before the bird came running up quite boldly to enquire after its young.

BLACK GAME.

This photograph is of a nest of the black grouse, who are perhaps better known as black game, the male and female being called respectively the blackcock and greyhen. Situated as these nests usually are on grassy hillsides, they are frequently (as happened in this case) destroyed by rooks. Here we see a greyhen on its nest, more securely hidden in a young larch plantation. It is to be regretted that this bird has decreased in this locality. The diminution of cropping, the draining of hill marshes, and the fertility and increase of the pheasant, all help to banish black game.

PHEASANT.

This nest of pheasant eggs would be regarded as a good clutch. The bracken has been laid aside, so as to better reveal the eggs. This slide shows the old bird on its nest, and was taken by Mr Legard in Yorkshire. The pheasant is a notoriously careless layer. I have found pheasants laying in the nests of ducks, black game, grouse, partridges, and woodcock, and in one case I knew of seven pheasants laying in one nest.

WOODCOCK.

It is satisfactory when we can affirmatively state that some bird is becoming a more constant visitor to this locality, and this, I am glad to say, is the case with the woodcock. Ten years ago a woodcock's nest was regarded as a rarity; now it is quite common. At Capenoch I can see woodcock in every month of the year. Here we see the woodcock's nest and eggs. The nest is but a depression in the ground, scantily lined with leaves or bracken. The eggs are not nearly so pyriform as might be expected of a bird of this family. This picture is of a woodcock

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on its nest. Some observers have stated that the woodcock when incubating always keeps her eyes shut—lest, in the words of the poet, "Her eyes should betray her secret." My experience has been that the eyes are more often open than closed. This bird was so tame that I could stroke her back with my hand, and she reared her young without mishap.

SNIPE.

This is the nest of a common snipe, well concealed by a tuft of rushes, which have been cut so as to show the eggs. Our next photograph, of the bird on its nest, was obtained with great difficulty. Although a dummy camera had been erected for many days, the bird was extraordinarily shy. The ground was flat and quite open, and though I could worm my way to within thirty feet of the camera, where I had the pneumatic release, however cautiously I peeped up to see if the bird was on its nest, it always saw me before I saw it, and was off before I could do anything. At last one day I pressed the bulb on chance of the bird being on its nest, with the result shown. This photograph was taken in splendid light at noon on June 24th, 1905, with an exposure of one-thirtieth, the lens being stopped down to 23.

WOOD PIGEON.

Here we see the nest of the wood pigeon, a nest not often easy to photograph on account of the height from the ground at which it is usually placed. This slide shows two young wood pigeons, fully fledged, in the nest. These birds gave us a great deal of bother to photograph, for they were sufficiently educated to resent the presence of the camera; and as fast as one bird was placed in the nest the other walked off to one side of the nest and so become out of focus. However, patience at last gave us their portrait.

CURLEW.

The curlew's nest is annually increasing in numbers on the grassy hills in the Thornhill district. Here we see the nest and eggs. In the spring of the year our hillsides still resound with the cries of this bird, and we have read that in the old Covenanters' days these birds often forewarned some poor wretch hiding in the peat hags of the approach of Claverhouse's

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dragoons, and so gave him time to effect his escape. This picture shows the curlew on its nest. Wild and wary as she is, maternal instinct has tamed her timorous disposition.

LAPWING.

Our next three pictures concern the lapwing or green plover, a bird so exceedingly useful to the agriculturist that it is regretted by some that it should still be legal to take its eggs up till the 15th of April. Here we see a nest made in a meadow; while our next photograph shows a nest made on a ploughed field. To get a photograph of a lapwing on its nest we had a hut made of spruce branches and placed for several days conveniently near a nest; but when we went to photograph the bird we found her eggs had all been destroyed by rooks. When moving the hut we found a blackbird had made its nest in the spruce branches; so care was taken when erecting the hut near a fresh lapwing's nest not to disturb the blackbird. This lapwing's nest was also destroyed by rooks, so the hut was moved a third time to another lapwing's nest; and this photograph was obtained. As I sat in the hut with my camera the blackbird, who had fearlessly followed her nest, incubated her eggs within two feet of me. Eventually, as the field had to be harrowed, the spruce branches of our hut were carefully placed at one side of the field, and here the faithful blackbird had the satisfaction of rearing her brood unmolested.

MERLIN.

This photograph is of a merlin's nest and eggs. One of these shows most remarkable colouration, being more like that of a kestrel than of a merlin-hawk. This photograph, as also the following one, was taken in Iceland by Mr Legard. It shows young merlins in the nest. This picture is interesting, as showing the development in the plumage of the nestlings you have seen in the preceding photograph. Only seven days had elapsed since the first photograph had been taken.

BLACK HEADED GULL.

Our next series of photographs deal with the black headed gull; a bird I consider misnamed, as for the greater part of its existence its head is white, and only in spring does its head become brown. A far more appropriate name would be the

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masked gull. This bird is a great benefactor to agriculture, but as is the case with rooks, kestrels, and owls, certain individuals by their carnivorous malpractices call down wrath on the whole of their community. At the Dhu Loch, near Capenoch, there is what is termed a large "gullery" of these birds. Here we see the birds at the Dhu Loch hovering over their nests. This photograph hardly gives a notion of the number of birds that assemble here to nest. This photograph is of the bird's nest and eggs; you will note that they are not unlike those of the lapwing, being of an olivaceous ground colour, blotched and spotted with dark brown, with undermarkings of grey, but not so pyriform in shape. They are often sold to the uninitiated as plover's eggs. This photograph, taken in Ireland, shows a clutch of extraordinary eggs, all pale blue, without any markings whatever. To find one egg of a clutch lacking in pigmentary colouration is not very unusual, but to find all three eggs in one nest absolutely spotless is, I believe, unprecedented. This picture is of the owner of the nest, anxious to resume its duties as a mother, yet still not quite certain what the camera is going to do. All fears set at rest, we see the bird once more settled on her eggs.

PUFFIN.

This picture shows the nest and egg of a puffin. As a rule these birds nest in burrows, and so large are the nesting colonies that it is at times impossible to walk over the ground they have burrowed, so often does one sink in up to one's knees. Here we see a colony of puffins on their nesting ground. You will notice that these birds carry themselves at an unusually upright angle.

GREAT AUK.

Our next photograph is of an extinct bird, the great auk. This photograph is from a stuffed specimen in the York Museum, to which it passed from the Strickland collection. The bird here shown is in summer plumage. This slide shows the great auk in winter plumage, and it will be noticed that the throat at this season of the year is whiter. This photograph is also from a specimen in the York Museum, who obtained it from the Rudstone Read collection, to whom it had been presented by Mr Bell of Thirsk. It may be interesting to note that the last great auk was killed in 1844; the last British specimen being killed some

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ten years previously. The only immature specimen of this bird known is in Trinity College Museum in Dublin. It was caught alive in Waterford Harbour, and was with difficulty kept alive for four months, mainly on potatoes and milk. Oddly enough, it devoured fresh water fish greedily, but did not seem to care for sea fish.

This is the photograph of a cast of a great auk's egg—from the Hancock Museum, Newcastle. Only some 71 eggs are now known to be extant.

SEA BIRDS ON FLAMBOROUGH HEAD.

Our next photographs are of that famous nesting resort of sea birds, Flamborough Head, off the coast of Yorkshire. Here we see the "Door" Cliff and "Staple Nook." Myriads of puffins and guillemots annually come here to nest, and when the Ornithological Congress met in England last year, the foreign members were taken to this spot as being one of the ornithological sights of Europe. Personally, on the unfrequented wild north-west coast of Ireland I have been far more impressed, both by the variety and numbers of birds there, and by the superior grandeur of the maritime scenery. This photograph, also taken at Flamborough Head, shows some guillemots sitting on a ledge of rock; and gives a good idea of the steepness of these cliffs.

LESSER TERN AND ARCTIC TERN.

Our next four photographs were all taken in Ireland, and concern the lesser tern. Here we see a nest on the sand. It is very seldom that any materials are made use of, and the supposition that this bird decorates its nest with pieces of shell is, I think, erroneous. Such decorations are employed by the ringed plover, whose old nests are occasionally utilised by the lesser tern. This photograph shows the eggs of a lesser tern placed in what I take to be a ringed plover's disused nest. The colony of lesser terns which provided us with these photographs nested in close proximity to a colony of Arctic terns. Here we see a nest containing three eggs of the Arctic tern and one of the lesser tern. That such mistakes do not more often happen, when large colonies of birds are nesting within but a few feet of one another, is one of the marvels of Nature. The Arctic tern was sitting on all four eggs, but I had left before they were hatched. This photograph shows

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the lesser tern on its nest. A pit was dug in the sand near the nest, into which my friend Mr Legard got with his camera. He was then covered over with old sacks and liberally sprinkled with sand.

Our next six photographs concern the Arctic tern. This photograph shows an islet on the Langa river, in Iceland, which was resorted to for nesting purposes by these birds. The next, taken in Ireland, shows two eggs in the nest. The eggs, which vary enormously, in colouration, are in this case dark chocolate brown, blotched and spotted with black, and with undermarkings of grey. Here we see an interesting photograph. You will notice that one egg is normal; the other is abnormal, being spotless and pale blue in colouration. When speaking of the black headed gull, you will remember that I said that to find one egg of a clutch lacking in pigmentary colouration was not very unusual. This picture shows the Arctic tern brooding its young, which can just be made out below the bird's breast. This photograph is of the same bird as in the preceding, and was taken in Iceland. It shows the bird at the nest, with its wings uplifted in a truly characteristic manner. Our next photograph, taken in Ireland, shows the Arctic tern contentedly incubating her eggs.

4th May, 1906.

Chairman—Mr ROBERT SERVICE, V.P.

It was agreed to record in the minutes an expression of regret at the deaths of three members of the Society, viz.:—The Right Hon. the Earl of Mansfield, Captain W. Stewart of Shambellie, and the Rev. Joseph Hunter.

Mr J. Rutherford, Jardington, exhibited an equatorial star finder of his own design for the use of beginners. The following is Mr Rutherford's description of the instrument:

A few years ago, when learning the stars, I sometimes had a good deal of trouble in finding the ones that I saw in the sky on the map; also, trouble and doubt were experienced in regard to stars I saw on the map in locating them in the sky. Under those

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circumstances, I very much felt the need of something to assist in searching, and for confirmation of my observations. After some consideration, I designed and made the finder you now see. The circles are made from old clock dials roughly divided by hand (cardboard would do quite well). The right ascension circle is divided to minutes, the dec. to degrees. The finder requires to be placed on a level stand (I used a large flower vase). It must stand when in use in its proper position in regard to the meridian of the place. To do this, find the longitude of the place on a map, and for every degree that it is west of Greenwich it will be 4 minutes later than Greenwich time; for every degree that it is east it will be 4 minutes earlier. This will give the time of the place when this is found. Stick a piece of wire upright on the top of the stand, and at the correct time of noon draw a line along the shadow made by the wire and the sun; this line will be the guide for placing the finder. To find the polar axis, take a piece of wood or cardboard, say, 14 by 18 inches, stand it with its 14-inch end on the top of the stand or table. Look along its edge, and tilt it until the edge comes in a line with the pole star; this will give the required angle. To use, place the finder in its proper position as to north and south on the stand, guided by the line already drawn, and I will assume that the top star (Delta) in the belt of Orion is known to the observer. Look for its position in the star map, which will be found to be: R.A., 5 hrs. 26 mins.; Dec., 0 deg. 23 mins. S. Look through the tube, and bring the star into the centre, turn the R.A. and Dec. circles until the pointers are on these figures. Now, suppose you want to find Castor in Gemini: Find its position on the star map, which is R.A. 7 hrs. 27 mins., Dec. 32 deg. 9 mins. N. Without touching the circles, turn the Dec. and polar axis until the pointers are on these figures, and the tube will be pointing to the star, or very near it. Now, suppose you see a star or group of stars in the sky, and you wish to know what this particular star is, or in what constellation the group is. Again adjust the R.A. circle on Delta (Orion) or any other star the position of which is known; turn the tube to the star or group, and the pointers will give the R.A. and Dec.; find this place on the star map, and this will show what the star or group is, and in what constellation it is situated. It is not to be expected from this roughly-made and imperfectly-divided finder that its readings will be quite accurate, but it cer-

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tainly is a great help to anyone just beginning to learn the stars and constellations. I designed and made it in a hurry, and used it along with the telescope until I got pretty familiar with the different constellations and principal stars; it may be constructed in a short time by any amateur mechanic of ordinary capacity. I may add that to get a familiar acquaintance with the stars a telescope is not really necessary, but a good star map is required, and I can recommend to all beginners Proctor's small atlas, price 5s, and when used along with Webb's "Celestial Objects for Common Telescopes" and a good 3 in. glass, and all mixed up with a real desire "to know," it is all that any amateur astronomer may desire.

THE BIRTHPLACE OF ANNA LAURIE. By W. DICKIE.

This note is a sequel to the very pleasant visit which the Society paid to Glencairn last summer. You will remember that our host at Maxwelton House, in the very interesting account which he gave us of the house and the Laurie family, mentioned an idea which has lately prevailed in some quarters, that the heroine of the song which has made the house and its "braes" celebrated was born, not in Maxwelton, but at Barjarg Tower, in the neighbouring parish of Keir. In conversation with Sir Emilius I learned that the only basis for this theory was the record of her birth in what have come to be known, somewhat vaguely, as "the Barjarg Manuscripts." I expressed the opinion that it rested on a misapprehension of the nature of these records, and I undertook to make inquiry on the subject. I have since done so, and it has been suggested by the Secretary that the result should be recorded in the Transactions of the Society.

The Laurie family records of the sixteenth and seventeenth centuries, I ascertained from Sir Emilius, have not been preserved at Maxwelton; but I found in the valuable library at Barjarg, to which I was kindly given access by Mrs Hunter Arundell and Mr Wadd, a transcript of that record, covering the period from 1674 to 1731. It is this copy of a Maxwelton document—not an original record kept at Barjarg—which contains the entry of the birth of Anna Laurie. The following is a complete copy of the record;—

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MAXWELTOUN REGISTER.

At the pleasure of the Almighty I was married to my wife, Jean Riddell, upon the 27th of July, 1674, in the Trone Kirk of Edinb. by Mr Annane.

At the pleasure of God my da. Cath. Laurie was borne upon the 15th of June, 1675. She was baptized upon the twenty 2d of the same month by Mr Geo. Hunter.

At the pleasure of the Almighty God my son Robt. Laurie was borne upon the 21st of July, 1676, about 2 o'clock in the afternoon, it being upon a Wednesday, and he was baptised upon the 8th day of Augt., 1676, by Mr Geo. Hunter at the Kirk of Glencairn.

At the pleasure of the Almighty God my Da. Jane Laurie was borne upon the 12th of July, 1677, about 9 o'clock in the morning, it being upon ane Thursday, and she was baptised upon the 25th of the same month by Mr Geo. Hunter, our minister.

At the pleasure of the Almighty God my Da. Violat Laurie was borne upon the last day of June, 1680 years, about 12 o'clock at night, it being upon Wednesday, and was baptized by Mr Geo. Hunter.

At the pleasure of the Almighty God my Da. Susanna Laurie was borne upon the 15 of July, 1681 years, about 6 o'clock at night, and was baptised at Glencairn Kirk by Mr Geo. Hunter upon the 26th of the forrsaid month.

At the pleasure of the Almighty God my Da. Anna Laurie was born upon the 16th day of Decr. 1682 years, about 6 o'clock in the morning, and was baptised by Mr Geo.

At the pleasure of the Almighty God my sone Walter Laurie was born upon the 3d of May, 1684 years, being Saturday about 7 o'clock at night, and was baptised by Mr Geo. Hunter our minister.

At the pleasure of the Almighty God my son John Laurie was borne upon the 14 day of Oct., 1685 years, being Tuesday, about ten o'clock of the day, and was baptised by Mr Geo. Hunter our Min.

At the pleasure of the Almighty God my father Sir Robt. Laurie was called by Death, the 23d Augt., 1698 years, it being upon a Saturday betwixt 4 and 5 in the morning, his age being 57 on the 7 of Sepr.

Signed ROBT. LAURIE.

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At the pleasure of the Almighty God my brother, Sir Robt. Laurie, was called for by death upon the 28th of Feby., 1702 years, it being upon a Tuesday before 12 o'clock in the forenoon, his age being 27 come the 21 day of July ensuing.

Signed WALTER LAURIE.

At the pleasure of Almighty God my father Sir Walter Laurie was called for by death upon Tuesday, the 23 of Novr., 1731, at six o'clock in the morning, being aged 47 from the 3d of May last.

Signed ROBT. LAURIE.

The preservation of the terms of this interesting record we owe to Mr W. F. Hunter Arundell of Barjarg, who died in 1827. He cherished the idea of writing a history of the county of Dumfries and the county families, and had amassed a great deal of genealogical material; but he was not spared to cast the fruits of his industry into literary form. They were, however, placed at the disposal of the late Mr M'Dowall, and largely drawn upon in the compilation of his "History of Dumfries." The "Maxweltoun Register" is copied into a volume containing entries relating to many other families, and arranged in alphabetical order. The title prefixed to it, as well as the nature of its contents, shews that it is a register of events occurring in the Maxwelton family, and, except where otherwise stated, at their own residence. Maxwelton had been the life-long home of Sir Robert Laurie, the first baronet, who succeeded to the estate as a boy in 1648; and there his sixth child, Anna, was born on the 16th of December, 1682.

I communicated the result of my inquiries, with some other material, to Sir Emilius Laurie, and I received from him a letter, in which he wrote:—

"Let me again thank you for the very interesting article, a copy of which you have so kindly sent me. You have certainly completely cleared up the doubtful question of Annie's birthplace. I, too, had carefully read, as I thought, M'Dowall's History, but I do not remember to have read the preface, and, therefore, accepted the Barjarg myth. It is a case in which the injunction 'verify your references' needed application, and you have done well to all who love accuracy in historical statements in clearing it up. You have also cleared up to me another difficulty, namely, Anna's age at marriage. I had always supposed that the date on her marriage stone at Craigdarroch was the date of her marriage.

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This appears not to have been the case. You also show, which I was not aware of, that she was three years older than her husband, Alexander Fergusson. In the portrait which I have at Maxwelton of Annie and her husband she certainly looks the older of the two, and if the portraits were taken at the same time, which would seem to be probable, the circumstance is explained."

I may add that Sir Robert Laurie was first married to Marion, daughter of Sir Robert Dalziel of Glenae, their marriage contract being dated 21st April, 1662. Of that marriage there were born three daughters, one of whom became the wife of Alexander Ferguson of Isle, advocate. Sir Robert's second wife, mother of the heroine of the song, was Jean Riddell, daughter of Walter Riddell of Minto. Anna's marriage to Alexander Ferguson of Craigdarroch took place on 29th July, 1709.

PHTHISIS AND SANATORIA. By Dr JAMES MAXWELL ROSS.

Dr Maxwell Ross first showed a set of lantern slides illustrating the effect of the disease on the lung, the bacilli from which it originates, and methods by which it may be disseminated. Thereafter there were thrown on the screen tables and diagrams shewing the mortality from consumption in various countries. Those relating to England and Wales shewed a progressive decrease in the death rate from this cause in recent years, it having now fallen to 1.2 per thousand. The lecturer further stated that there was a more rapid fall in the death rate among females than among males. It might be that the dust occupations affected the latter to a greater extent; and factory legislation had probably affected females more than males. Taking into account the increase of population, the tables shewed that as compared with fifty years ago there was an annual saving of about forty thousand lives which under old conditions would have been sacrificed to this disease in England and Wales. The Registrar-General's reports shewed that about seven thousand people die from consumption in Scotland each year, and that the mortality per ten thousand of the population had dropped in thirty years from 27 to 16, representing a saving of nearly five thousand lives per annum. This gratifying improvement was more largely the result of what had been done by the sanitary authorities in large towns than of any change in rural districts or small towns.

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Tables of the consumptive death rate for five-years' periods in Edinburgh and Glasgow shewed a fall in each period. This was markedly the case in the city of Glasgow, and was a most gratifying result of the action of the Town Council in regard to sanitary matters. Dr Ross also shewed a diagram illustrating the consumptive death rate in the burgh of Maxwelltown, for which he is medical officer. It shewed the extreme fluctuations which you got in small communities. To get a proper idea of the rate of mortality in Maxwelltown you would require to take a longer period than ten years. Last year it was below one per thousand. If that would only continue, they would have great reason to congratulate themselves on the reduction of the death rate in that burgh. Exhibiting a diagram which shewed by curved lines the rate of mortality in Scotland generally and in the county of Dumfries from consumption during the last twenty-five years, Dr Ross said this would almost make one pessimistic, as it shewed that the death rate of Dumfriesshire had often been the largest of any county in Scotland. A coloured map indicating the distribution of the disease in the county during the past fifteen years shewed that the death rate was highest in Nithsdale. Another diagram shewed the death rates in the landward part of Dumfriesshire during the last twenty-five years from consumption and from zymotic diseases respectively. The zymotic diseases, he explained, include smallpox, scarlet fever, diphtheria, typhoid, whooping cough, measles. From the period 1881 to 1890 the zymotic diseases and the phthisis diseases had a mortality not very greatly differing from each other; but from 1890, when the change in local government occurred, as the years went on, and more and more was being done by the local authorities for prevention of zymotic diseases, the death rate from these diseases gradually declined, while there was very little difference in the death rate from phthisis, for which nothing had been done. This was an indication to local authorities that when they had done as much for phthisis as they had done for zymotic diseases they would bring about a corresponding improvement. Turning to the consideration of preventive measures, Dr Ross showed photographs of bottle spittoons for use by consumptive patients, and he spoke of the great danger from infected sputum. When he went about the infirmary, he remarked, he was struck by this, that there was an enormous number of cases of glandular

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diseases of the neck. Many operations were performed on children for removing glands and so on. A number of the children came from the closes about High Street and Queensberry Square. He would like them to think what the loafers in that square and "Monument rangers" were doing. They were loafing about there, spitting broadcast, and some of them them were known to be suffering from phthisis. The sputum became dry and was carried about as dust. The children, playing about, inhaled that dust and the bacilli of phthisis which it contained; and so they contracted the disease. Touching on conditions tending to promote the spread of consumption, Dr Ross mentioned the want of sufficient sunlight and of free movement of air in the closes of towns. He finally showed a set of slides illustrating the construction of sanatoria and the results of the treatment.

In reply to a question as to how Dr Ross accounted for the large amount of consumption in Ireland as disclosed by one of the slides, the smaller amount in Scotland, and the still smaller amount in England and Wales,

Dr Ross said he was afraid the answer to that question would involve a pretty long dissertation. Generally speaking, it was a question of housing and living. They knew what the housing and living were in the lower parts of Ireland; and what it was in certain parts of Scotland had recently been shown by the medical report on the prevalence of this disease in the Lewis. In England a number of Boards of Guardians had been in the habit of giving out-door relief to consumptive paupers and allowing them to live with their families, where they became centres of infection. Some years ago they changed their policy, and insisted that consumptive paupers should go into the workhouse infirmaries. Coincident with that, there had been a considerable fall in the death rate from this cause in England and Wales. Factory legislation and sanitary improvement had helped very much.

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FIELD MEETINGS.

Field Meeting—2nd June, 1906.

(From the Dumfries and Galloway Standard.)

On Saturday the members of Dumfries and Galloway Natural History and Antiquarian Society, to the number of over forty, had a field day in Borgue district, and were the guests of Mr and Mrs Brown at their beautiful coast residence of Knockbrex. They were met at Kirkcudbright railway station by several gentlemen resident in the district, including Mr John M'Kie, R.N.; Mr E. A. Hornell, artist; and Mr John Douglas, Barstibly. Brakes, kindly provided by Mr Brown, were in waiting for their conveyance. Numerous points of interest were pointed out on the route, and the drive through a sylvan district, in sight of the Dee and the Solway, in brilliant summer weather, was greatly enjoyed. A halt was made at Borgue House, where, by the courtesy of Mr W. T. Sproat, the company were enabled to inspect the ruins of Borgue Place, immediately behind the modern mansion-house. The Place is chiefly interesting as an example of architecture which came into vogue after the union of the crowns and the better settlement of the country. The building occupies three parts of a square. The wall on the fourth side, with its strong gate, has long since disappeared. Driving past Borgue village, with its beautiful Parish Church, and Chapelton Row, Earlston House, the residence of the late Sir William Gordon, was pointed out. The view from here is very fine, and the day being an ideal one, everything was looking its best. To the left is the broad expanse of Wigtown Bay, with the Wigtown coast standing out clear and sharp, the coast line between Gatehouse and Ravenshall being also very distinct. Nearer, nestling in the hollow of the shore, is the hamlet of Kirkandrews, and further on are the woods of Knockbrex. Passing Carleton farm-

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house, the old manor house of the Earlston estate, on the right, a halt was made at Barmagachan, tenanted by Mr Barber. This is another example of the same style of architecture as at Borgue Place. Near by is Barmagachan Moat, a small but very perfect example of the circular mound.

The journey was then resumed by way of Margrie to Knockbrex, where they were most hospitably received by their host and hostess. Under the fostering care of Mr Brown, Knockbrex is rapidly becoming one of the most beautiful places one could wish to see. The ancient home of the Gordons has been transformed into a handsome modern dwelling-house; but it is on the grounds that the greatest transformation has taken place. The gardens have been in course of extension and development since Mr Brown acquired the estate, and when the shrubs and other plants recently added have become established they will rank among the most beautiful in the South of Scotland. A delightful artificial lake, with various bays and inlets, surrounded by rhododendrons and other flowering shrubs and trees and choice conifers and foliage trees, was much admired. It has been formed with much taste, and the rockwork to the west, recently constructed, is extensive, and has been planted with a number of choice rock plants. There is in front of the house a spacious lawn and a number of beds, each filled with a choice variety of roses. A fine pergola, about 150 feet long, has also been added for climbing roses, and a unique "sunk garden," after the style of the ancient Roman gardens, has been formed in the centre of the lawn. The paths are paved with pebbles like tesselated stone work, and the beds are filled with the finest shrubs and plants suitable for the position, while the walls will be covered with climbers and wall plants. The kitchen garden and glass-houses were also visited and are of an extensive character, and do credit to Mr Bennett, the head gardener.

After having been entertained to a sumptuous tea, the party were conducted over the grounds, visiting the splendid stables, the electric installation, and the laundry, all of which are perfect models of their kind, and all fitted up with the very latest appliances. Mr Brown has also recently formed a harbour, where small vessels may land their cargoes, and near it is a large storehouse.

Returning to the house, Mr M'Kie, addressing Mr Brown,

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said that, as it was chiefly through his recommendation that the members of the Society were led to visit that district, he had, therefore, personally to thank Mrs Brown and himself most cordially for their great courtesy and kindness. The members had had an opportunity of seeing the beautiful and natural arrangement of the grounds, but they could have no idea of the taste and skill, to say nothing of the cost, which it had taken to bring these to their present state and condition. It might truly be said of this place, as did the poet when describing the highways then recently opened in the Highlands, who said—

> **Had you seen these roads before they were made,**
> **You would hold up your hands and bless General Wade.**

Had they seen this place before Mr Brown took it in hand and as they saw it that day, whatever they might do in the way of blessing, he was sure they would be struck with surprise and admiration. In the early part of last century that wayward genius, John M'Taggart, sang of Borgue as "a parish famous for its Browns and Sproats, the like ot's no on this side John o' Groats!" They had ample proof now before them that since then the race of Browns had in no way degenerated, as we held whoever made a portion of his Majesty's dominions beautiful, as Mr Brown had done these, deserved well of his country. The visitors would presently have an opportunity of seeing the interest he was taking in antiquarian research, through having had the accumulated rubbish removed from the Broch at Roberton, whereby its form and structure could now be seen, and it would be interesting to get the expert opinion of the society as to its probable origin and the purposes for which it might possibly have been used. While tendering thanks, it was with the hope and trust that Mrs Brown, himself, and family might long be spared to enjoy the fruits of his most interesting labour.

Mr Barbour also added a few remarks, and expressed the wish that Mr Brown and his family would long live to see their work come to maturity.

Mr Brown, in reply, said the visit of the society to Knockbrex had been a great source of pleasure to Mrs Brown and himself, and it was a pleasure they had greatly looked forward to. Anyone of an artistic temperament was always welcome to Knockbrex. They valued the kind remarks that had been made,

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and appreciated them very much. The people who were not welcome at Knockbrex were the people who went about uprooting flowers, carving their names on rocks and trees, and scribbling on gates; but anyone interested in botany or natural history would always be made very welcome there.

At the business meeting the following new members were admitted:—Mrs Waddell, Victoria Terrace, Dumfries; Mr D. H. Hastie, Dumfries; Mr W. M. Grey, 5 Victoria Terrace, Dumfries.

The party, accompanied by Mr and Mrs Brown, then drove to Corseyard, the residence of Mr P. M'Connell, Mr Brown's factor, where the visitors' book was signed.

A visit was then paid to the "broch"* on the Roberton shore discovered some time ago, and which has been excavated and cleared out under Mr Brown's direction. The main entrance is from the side nearest the road. The "broch" consists of two walls, with a passage about three feet wide between. The ground appears to have been excavated, as the outer wall is built against the rock. When first discovered the walls, outer and inner, were about three feet high. A mark has been made indicating the height when found, and they have been considerably heightened. From the inner court a number of openings lead into the passage. This has evidently been covered, as at the west corner the slabs across are still in position. In the south corner is a part of the original pavement, and here most of the interesting relics, now at Knockbrex House, were found. These consist of a beautiful ear-ring found in the main doorway, teeth, skeleton of a hand, remains of chain metal, blue and white bead, rings. Still lying in the "broch" are to be seen a quern, a stone knife, and a whetstone, all in excellent preservation; besides fragments of deer's antlers. On the south-west is a passage leading through both walls, and still showing the original path to the shore, covered with rough slabs. Another peculiarity is the number of openings leading into the passage. The whole building is circular. The importance of the discovery lies in the fact that no structure of this kind has hitherto been known to exist in the south-west parts of Scotland. A broch is described by Dr Joseph Anderson as a hollow circular tower of dry-built masonry, rarely

* NOTE.—Since this was written further research has shown that this building is not a "broch" but an ancient fort.—ED.

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more than 70 or less than 40 feet in total diameter, occasionally at least 50 feet high, and enclosing a circular court or area from 25 to 45 feet in diameter. In his opinion, it is clear that these ancient buildings were used as places of refuge, and in those days they would be practically impregnable. Roberton broch is built on a rocky eminence, but whether it was also defended by ditches and embankments, earthen ramparts, or dry stone walls has not yet been ascertained.

A hurried visit was paid to the ancient hamlet and churchyard of Kirkandrews, which contains two stones erected to the memory of Covenanters done to death near by, and the grave of William Nicholson, the Galloway poet. Mr Brown, with characteristic generosity, is building a handsome chapel at Kirkandrews to take the place of the old meeting-house. A beautiful lych-gate has also been erected.

The party were greatly indebted to the veteran Mr M'Kie, for so kindly acting as guide, and pointing out and explaining the various objects of interest on the route.

Field Meeting—16th June, 1906.

(From the Dumfries and Galloway Standard.)

MOFFAT DISTRICT.

A party, numbering about twenty, paid a visit to places of interest in the vicinity of Moffat. Driving first to Auchencastle, they had, through the courtesy of Mr Younger, the privilege of inspecting the fine collection of pictures, which includes a beautiful portrait of a lady, "Madame Elizabeth of France," by Vegee Le Brun; characteristic works of George Morland, Sidney Cooper, Sir W. Beechey, Horatio M'Culloch, several works of Dutch painters; a striking portrait of Oliver Cromwell as a comparatively young man and in armour, suggestive rather of the Cavalier than the Roundhead. Mr Younger has also in his study a most interesting collection of print portraits of distinguished British statesmen. Among numerous artistic objects to engage attention was a massive piece of old oak carving forming the frame work of the hall chimneypiece, the side supports being statues carved in wood. The beautifully laid out grounds around the castle present at this season a gorgeous mass of colour, pro-

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duced by extensive clumps and deep banks of many-tinted rhododendrons and azaleas; and the chestnuts and laburnums also bear a profusion of blossom. Under the guidance of Mr M'Adam, head gardener, the visitors made a round of the conservatories, vineries, and peach-house, where they found much to admire; among other special features, the magnificent collection of calceolarias, each of distinct colour and all of a wonderful size; the fine, rose-like carnations, and splendid double begonias. Driving next by way of Lawesknowe to the old castle of Auchencas, an inspection was made of its ruins. The outer walls, which are about ten feet thick and enclose a square of about 120 feet, remain to a height of several feet, as grass-grown ridges, along their whole length, and stumps remain of three of the angle turrets. The encircling moat also is plainly to be traced for almost its entire extent. But the internal buildings have wholly disappeared. The castle is associated with the name of Randolph, Earl of Moray, the comrade of Bruce, and afterwards Regent of the kingdom; but little mention of it is made in history. It is known that it became the property of the Johnstones of Corehead in 1638, and that it had formerly been the property of the Douglases of Morton. Proceeding next to the beautiful Garpol Glen, which is in the immediate vicinity of the old castle, the party viewed its pretty water falls, noted its geology, particularly the spots where the Silurian shales are exposed and samples of the Moffat graptolites can be obtained; and found much to interest them in its wealth of flora. Emerging at the foot of the glen—where a long tunnel has been made in the rock to carry the stream below the Caledonian Railway—the party walked across the fields to Auchencastle avenue, where they rejoined the brakes. On the way they passed St. Margaret's Home, a practical embodiment of Mr Younger's philanthropy, providing as it does a place of country residence for invalid city children during periods of convalescence. Driving up the valley of the Evan as far as Longbedholm, they thence proceeded by the steep hill road over the ridge into the valley of the Annan, and called by the way at Chapel farm to inspect the remnant of the old chapel of the Knights Templars, from which it derives its name. The remains consist of a portion of the west gable, with three-light pointed window, of which one of the mullions is awanting, and part of the east gable, in which had been the doorway. The latter has

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been built into the gable of one of the farm cottages; but through the kindness of Mr Lindsay, the farmer, the visitors were enabled to climb the loft and see there the top of the pointed arch of the chapel wall. Traces of foundations show that there had been extensive buildings adjoining the chapel, and it is said that the Templars possessed land for two miles up the valley, including Gardenholm, where their orchard was. They also had an establishment at Frenchland, on the opposite side of the river and town. In a document of date 1355 the chapel is referred to as "Kyrkbride, in the tenement of Kirkpatrick-Juxta, Moffat, in Annandale," and it is stipulated that the redemption money of a certain property, on which a "wadset" or mortgage had been granted, was to be paid on a green cloth before the high altar of the church so designated. The lands of Chapel were anciently known as the barony of Cuthbertrig.

In the Council Chamber at Moffat, to which the party next proceeded, Dr Pairman exhibited a very interesting collection of articles from New Zealand (in which he was long resident), illustrative of the life and customs of the Maoris, and also a number of other curios; and Mr J. T. Johnstone, who had been the guide for the day, shewed some examples of worm burrows and castings from the shales of the neighbourhood. Tea was provided through the kindness of several members resident in Moffat.

A short business meeting was held, at which the Rev. Mr Andson presided. Mrs Manson, Acrehead, Dumfries, and Mr William Miller, Moffat, were admitted as new members. Thanks were tendered to Mr Younger, Dr Pairman, Mr Johnstone, and to their hosts.

Field Meeting—28th July, 1906.

BONSHAW TOWER.

On the invitation of Colonel Irving a large party connected with the Dumfries and Galloway Natural History and Antiquarian Society visited "the chief" at his ancestral home on Saturday. Some went from Dumfries by train to Annan, and thence drove across the country. Others motored all the way,

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Mr Penman kindly placing at their disposal a handsome touring car which he had just built, and which is seated for twelve. Several journeyed from Lockerbie and Moffat. When fully mustered the company numbered 46. Bonshaw Tower stands on the right bank of the Kirtle, which at this point rises as an almost sheer rocky precipice to a height of about a hundred feet; and it is screened by umbrageous wood, much of it of venerable age. Beside it also is a bosky glen, with a succession of small waterfalls, and made accessible by pleasant paths and rustic bridges. The tower itself is a venerable battlemented structure, of the square pattern common on the borders, occupying the site and embodying probably part of the masonry of a baronial residence which is believed to have existed there from the early part of the eleventh century. Attached to it by a long hall, which might be described as a museum of arms and trophies of the chase, is the modern residence, the date of which is attested by the following lettering on a memorial stone: "1770. W. Irving J. Douglas." The names are those of the Irving chieftain of that day and his wife, a daughter of the ducal house of Queensberry. The inscription is placed over the main doorway, but that has been closed up, and tower and mansion have now a common entrance. The terrace overlooking the Kirtle is protected by low ramparts, on which are mounted six old cannon, and at one angle are remains of a smaller detached tower of ancient date. The flag of the Irvings, bearing their badge of three holly leaves, floated from the tower. Another Irving flag and the Scottish standard were displayed from the ramparts; and a piper in full Highland costume paraded the lawn playing a welcome to the visitors. They were most kindly received and hospitably entertained by Colonel and Mrs Irving and their daughters, and spent a most interesting day in inspecting the old tower, of which the original character has been preserved practically intact; in examining the many interesting mementos which have been collected within it; and listening to the Colonel's breezy narrative regarding the annals of the Irving clan, the stirring border scenes in which they figured, and more recent events of a warlike character in which individual members of it have taken part. "Bonshaw" is strongly possessed by pride of race and pride of country, and has a well-grounded aspiration to be the historian as well as the

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chief of his clan. Before succeeding to the estate and taking up his residence at Bonshaw he served his Sovereign in the field. His army experience was varied, beginning in the King's Own Regiment, and being subsequently transferred in succession to the military train, the transport service, and the Manchester Regiment. It was when colonel of this regiment that he retired from the army and bade farewell to military service, except such as may be incident to the duties of a member of the King's Bodyguard for Scotland. He took part in the Abyssinian campaign of 1867-8, and was at the storming of Magdala. Some of the most interesting objects in the tower are connected with that incident. They include a gold altar cross of Coptic work, with ornamentation of serpents, doves, and crosses; a sacred cup, and other articles which formed part of the loot of the capital. There are also weapons of numerous and curious forms in use in Abyssinia, Madagascar, South Africa, and India, as well as those of continental armies. It was curious to see an old-fashioned steel spur, with spikes of cruel length, such as was anciently in use on the Scottish and English border, side by side with one of the modern Mexican cowboy. The resemblance in shape is almost exact, but in the cowboy's the spikes are shorter. The walls are adorned with horns of the antelope, the vilde-beest, and kindred species, and with antlers of the reindeer and the wapiti deer—the latter specimen having no less than fourteen tines.

Beginning the exploration of the tower, the visitors first passed under "the Crusader's Stone," which is built into the roof of the little square entrance hall. It bears the sacred monogram in ancient Hebrew letters, and tradition says that it was brought from Jerusalem by an Irving who took part in one of the first crusades. Passing into the retainers' kitchen—a barrel-arched apartment of spacious dimensions—they had their attention directed to the immense stone bin, in which salted provisions could be stored in time of siege, and had an opportunity of making brief personal acquaintance with the dungeon. This is a small apartment in the thickness of the wall, capable on a pinch of holding fourteen persons. It is windowless and perfectly dark, but a small opening in the wall carried right up to the battlements admits of the ingress of a very meagre supply of air. Opening off the same little entrance hall is the stone stair of the

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wheel type; or, as it was often called, a "turnpike," which goes to the battlements, and off it open the various apartments of the tower. The great hall is now the library. The apartment which forms the second storey was the chief bedchamber. Here, in an angle of the wall, is a little chamber from which a narrow square opening in the wall is carried right to the foundations of the Tower. Tradition has it that this communicated with a secret passage cut through the freestone rock from Bonshaw to the neighbouring tower of Robgill, about a mile distant; and that through this passage, in time of need, food was conveyed to the garrison of Bonshaw, and drawn up by a rope through this channel in the wall. A hole in the rock is to be seen at the Robgill end, which is said to have been the opening to this tunnel. A corresponding but smaller opening is carried up from the roof of the little chamber in the wall at Bonshaw to a still smaller secret apartment above, in which a man might be concealed, and who might be fed through that opening. The third storey has the original heavy roof beams still in position, fastened together by oak pins instead of the modern nails. This is now a billiard-room. On the battlements there is a pathway along all four sides of the tower, and on each side there are double openings, through which molten lead or boiling oil could be poured on assailants.

The tower has its traditional ghost of a hapless daughter of the house, who was thrown from the battlements because of her determination to wed a member of the house of Maxwell, with whom the Irvings had a long and bitter feud; but, of course, it does not walk by day, and it is disappointing to learn that it has not been known to walk at all within living memory.

Colonel Irving showed his visitors some interesting family records; among them the marriage contract of Margaret Johnstone, of the Annandale family, and Christopher Irving, younger of Bonshaw, in 1566. It bore to be signed "at the Lockhouse," which we take to be Lochwood, the ancient seat of the Johnstones, near Moffat. The father of the bride signed himself simply "Johnstone." Edward Irving of Bonshaw is made to say that he signs it "with my hand at the pen, led by a notary, at my command, because I cannot write." The Colonel mentioned that this Irving was a striking proof that learning is not essential to soldiering, for at the age of ninety he charged at the head of

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his clan on horseback at Dryfesands, and turned a threatened defeat into victory for the Johnstones and Irvings. Cows and other bestial figured in the dowry of which the marriage contract made mention. Another possession of the family which attracted attention was an old chap-book containing an account of the capture of Donald Cargill, the Cameronian leader, by Christopher Irving of Bonshaw, at Covington Mill, and picturing his unholy glee at thus securing a reward of five thousand merks which had been offered by the Government of the day.

The visitors were entertained to luncheon and tea; and in course of the afternoon a meeting of the society was held in the library, at which the following new members were proposed by Mr Arnott, seconded by Dr Semple, and admitted:—Mr and Mrs W. Matthews, Dunelm, Maxwelltown; Mr and Mrs White, Noblehill Schoolhouse; Mr George Will, Crichton Royal Institution; and Miss Graham, Kilbarchan. Mr Dickie, who presided, tendered the thanks of the society to Colonel Irving for his kind invitation to visit Bonshaw and for the generous hospitality extended to them, and asked him to convey their thanks also to Mrs Irving and the members of their family. It was a privilege, he said, to have the opportunity of examining a typical border tower so well preserved as Bonshaw was, and entwined as it was with the story of old romance and warlike foray; and it was even more interesting to meet in their host a survival of the border chieftain. They had experience of his kindly nature; and might say of him that the gentle heart of a knight of chivalry beat under the rough armour of a border chief. Dr M'Lachlan, Lockerbie, seconded the vote of thanks, and observed that, notwithstanding the rather unfavourable weather, they had spent a most interesting and pleasant day. Colonel Irving assured them it had been a great pleasure to welcome the society to Bonshaw, and confessed that he loved the old tower like a living creature.

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Field Meeting—8th September, 1906.

(From the Dumfries and Galloway Standard.)

SPRINGKELL AND ECCLEFECHAN.

The last of the season's field meetings of Dumfriesshire and Galloway Natural History and Antiquarian Society took place on Saturday, when between forty and fifty ladies and gentlemen paid a flying visit to Hoddom Church and Ecclefechan, and spent the afternoon at Springkell, as the guests of Sir Edward and Lady Johnson-Ferguson, viewing the works of art of which their palatial residence is a veritable treasure-house, and enjoying a walk along the sylvan banks of the Kirtle to the scene of the tragedy of love and jealousy celebrated in the fine old ballad of "Fair Helen." The bulk of the party journeyed from Dumfries; and on the way their number received accessions from Annan, Lockerbie, and Moffat. Driving from Annan by way of Hoddom Bridge, they first halted at the parish church of Hoddom and had an opportunity of viewing the interior, in which the old custom of a separate gallery for the chief heritor is still maintained. In the porch is preserved an inscribed slab, which links Christian Britain of the twentieth century with Pagan Rome of the second. It is a tablet dedicated to Jupiter, and was probably brought from the important military station of Birrens (on the farm of Broadlea, near Kirtlebridge), or perhaps from the post which the Roman soldiery occupied on Birrenswark Hill. It was built into the wall of the old church, for which much of the material might be got from the buildings left by the Romans, and since its demolition in 1815 the stone has been preserved in the modern church. Many of the words in the inscription are contracted, the first three being represented only by initials; but the skilled in such matters render it thus: "Sacred to Jupiter, the best and greatest. The First Cohort of Germans, called the Nervana, under the command of L. Fænius Felix, the tribune, erected this." Among the memorials of the dead in the surrounding graveyard is the family tombstone of the Sharpes of Hoddom, the record on which includes the names of the litterateur, Charles Kirkpatrick Sharpe, and his brother, General Matthew Sharpe, the first popularly elected member of Parliament for the Dumfries Burghs. One of the oldest stones is inscribed in large raised letters to the memory

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of "Mr Mathew Reid, who laboured in the church of Steipel-goordoune," an old parish now incorporated in Langholm, and who died seven years before the Prince of Orange came to the throne of these islands. A never-failing object of curiosity is the tribute to the perfect woman. A stone raised aloft, so that all may read, proclaims her virtues in these terms:—

1779.

This monument is erected by James Clow of Land in memory of Mary Hunter, his spouse. She was daughter of Robert Hunter, late in Middleshaw, and sister of John Hunter in Braehead of Hoddam. She was a virtuous wife, a loving mother, and one esteemed by all who knew her. And to be short in her praise, she was the wife that Solomon speaks of in the xxxi. chap. of the Book of Prov. from the 10th verse to the end.

Affliction sore some time she bore
With patience, did resign
Her life to God, that sure abode
Where saints and angels reign.

A satirical dominie of the parish, William Irving, who is credited with the authorship of that "pungent pasquil," "Lag's Elegy," presented another side of the shield in the following rhyming commentary:—

"She was the wife!" Oh Solomon, thou fool,
To make a pattern o' this grubbing tool;
She clothe her house in silk and scarlet fine!
Say rather i' the linsey woolsey twine,
Her husband 'mongst the elders at the gate!
Yes—known for nothing but an empty pate,
For guzzling down whole chappins o' sma' beer,
And selling meal and maut a groat too dear.
Such were the honest, silly "Clows"—say clowns,
Which every roll of honest fame disowns,
Who erst, like Moses, brake the ten commands,
That is the sacred relicts of the Lands."

Driving along the beautiful tree-fringed avenue that forms the highway between the church and village, the party called at the churchyard of the ancient parish of Ecclefechan, their chief object, of course, being to view the graves of Thomas Carlyle and his kindred. The place has a more cared-for appearance than it once presented, and a number of old stones, of cumbrous form

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and in some instances uncouthly lettered, have been set up against the wall for preservation. One of them bears the date 1669. Above the severely simple inscription on the tombstone of Carlyle and his brother, Dr John, are carved the family crest—two wyverns—and motto, "Humilitate." It was noted that the coat of arms, somewhat varied in style, also appears on the back of the stone erected to the memory of his parents by a family "gratefully reverent of such a father and such a mother;" and on several other Carlyle stones scattered throughout the churchyard. "The Arched House" was also visited, and the numerous articles connected with Carlyle which are appropriately preserved in his birthplace were examined with great interest. Several of the company also made a call on Mr Graham, merchant, and were privileged to see three letters in the autograph of Admiral Lord Nelson, which are family heirlooms. They were addressed to Mr Graham's grand-uncle, Dr Graham, a naval surgeon, who served with the hero of Trafalgar on one of the ships which he commanded. The first was written from Burnham, Norfolk, in 1790, when Nelson was awaiting appointment to a ship. In it he complains of being greatly plagued by prosecutions about "these captures in the West Indies." An action had been raised against him for £5000 on account of one captured vessel; and while he was being defended by the Government, the action was a source of annoyance to him, and he contemplated the possibility that he might be put in prison if the decision should be given against him. He whose famous signal to his fleet has since become a historic trumpet-call to discharge the whole of duty, wrote to Dr Graham under the exasperation of that experience:—"All this shews that one may do his duty too well." Another of the letters was the first which the Admiral wrote with his left hand; and his correspondent used to relate that he practised writing with the left hand before he lost the right arm under a presentiment that such a calamity might overtake him. The third letter acknowledges congratulations on his elevation to the peerage. Dr Graham had proposed to make him the compliment of a brace of birds, and the Admiral asked that they should be sent by waggon to London, a practical commentary on the changes in locomotion which the years have witnessed.

From Ecclefechan the drive was continued by way of Kirtlebridge and Eaglesfield to Springkell; but on the way a detour was

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made along the avenue of Blackett House in order to view Blackett Tower, which was the seat of the head of the Bells of Middlebie. The rejected suitor of Helen Irving was a Bell, and this is reputed to have been his residence. It has been a small tower of the customary square type, and is now in ruins, although on two sides the walls are entire. Over an entrance way is a shield lettered thus:—

I B I I
1663.

We have here doubtless the record of the marriage of a Bell with another Irving than "Fair Helen." A lintel on the inner side of the arch also serves as a marriage stone, the inscription being in one line:—

17 G B I E 14

At Springkell a very cordial welcome was extended to the visitors. It is a stately mansion-house, of Grecian design, in light-coloured sandstone. The central portion is a massive square block, having the date 1734 carved over the doorway in the southern front, which is flanked by graceful pilasters. On each side of it is a slightly projecting wing of about equal size, these having been added about the year 1818. During the twelve years that the property has been in the possession of Sir Edward and Lady Johnson-Ferguson the house has been entirely reconstructed, so that not a plank of the original wood remains in it, and it has also been somewhat enlarged. A very beautiful terraced garden has also been constructed, which is at present gay with choice blooms. Arboriculture is an art which has been long practised at Springkell, and of which the fruit is seen in the magnificent specimens of trees of various kinds which stud the extensive lawns. Among them are a giant silver fir, a great Spanish chestnut, and many others notable not more for their size than for their symmetrical proportions. Of beeches there is a noble avenue. The turf is of rich velvety quality, and recalls the anecdote of the American visitor at Oxford, who wished to know how it would be possible to obtain such a grassy carpet. "By two hundred years of close cutting every day" was the recipe offered to him.

The art treasures which Sir Edward has inherited and himself collected would adequately furnish a civic gallery. Through-

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out almost its whole length the house is intersected by a broad corridor, the walls of which are covered with oil paintings, as are also those of a spacious apartment opening off it. There are examples of the most distinguished British artists, one that arrests popular attention most readily being Landseer's large canvas, "Taking the Buck;" and Dutch, Italian, and French masters are also largely represented. Many of the paintings have a history which invests them also with an extrinsic interest. Many family portraits have a place in the collection, including one of Lady Johnson-Ferguson, painted since she came to Springkell by Sir Luke Fildes, R.A. The drawing-room is devoted to water-colours, of which the collection is at once choice and extensive. Here also is the marble bust of Queen Victoria by Mr Brock, R.A., the last for which her Majesty gave sittings, and the great merit of which has secured for the sculptor the commission for the statue which is to be placed in front of Buckingham Palace. Many other beautiful pieces of statuary adorn the house. One of these is a marble bust of Sir Edward's father, which was presented to the family by the employees of the firm which he founded in Manchester and Bolton. In the morning-room there is a superb collection of Turner prints, embracing the whole of the early issue of reproductions of the work of Ruskin's idol, engraved with exquisite finish. In the library again is an extensive portrait gallery of Sir Joshua Reynolds' prints; and another apartment contains a large collection of prints of Landseer's works. The family have travelled largely and have brought from many lands articles curious and rare, illustrative of modern life and ancient art. India, Egypt, the Soudan, Japan, Persia, Palestine, Italy, Greece have all been laid under contribution, and other countries as well. These curios, as well as the pictures, were displayed and explained to the party as they were piloted through the house by Sir Edward and Lady Johnson-Ferguson and a lady relative.

Springkell estate comprehends the whole of the ancient parish of Kirkconnel, which is now incorporated in Kirkpatrick-Fleming. Kirkconnel was indeed the old name of the estate, as of the parish, and a village as well as a residence of old date existed near the spot where the modern mansion stands. The little "God's acre" of the parish stands on a rising ground on the left bank of the Kirtle, approached by a pretty glade through

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the policies, of which it virtually forms part. Two heavy oblong slabs, raised on short supports, and lichen-grey, cover the tombs of Helen Irving and the lover whom she died to save. Not within living memory has any inscription been legible on the former; and from the latter has now practically disappeared what Wordsworth in his ballad calls "its lone hic jacet," although but a few years ago we were able to decipher quite distinctly the lettering, "Hic jacet Adam Fleming." The figure of a sword, extending almost the full length of the stone, is still quite legibly outlined, and another device beside it, which may have been intended for a cross, is more faintly seen. The story is a familiar one. Of two suitors the lady preferred Fleming (probably one of the Flemings of Redhall). Bell, inflamed by jealousy and disappointment, concealed himself on the opposite bank while the lovers strolled by the side of the Kirtle; then emerged from behind a tree and aimed a shot at his successful rival. Observing his murderous intent, the lady stepped before her lover, and received in her own bosom the bullet which was aimed at his. Swift vengeance was wrecked on her slayer by Fleming, who then fled the country and sought the balm of forgetfulness in foreign wars, but brought back to his mistress's grave a broken heart to be laid beside her. The romantic incident, which is traditionally assigned to the time of Mary Queen of Scots, has been the theme of many minstrels. We reproduce below the old form of the popular ballad, the authorship of which is ascribed to W. S. Irving, a native of Hoddom, who came to a tragic end by his own hand in Edinburgh. Sir Walter Scott, in his "Minstrelsy of the Scottish Border," mentions a doubt whether Helen was not of the same family as her "undoer," but there seems no reason to set aside the tradition that she was an Irving, of the family which possessed the estate of Kirkconnel until shortly after the year 1600, when it passed into the hands of the Maxwells. Several Irvings of Kirkconnel are commemorated in a burial plot adjoining her grave; which closely neighbours the roofless walls of the tiny church. Outside the burial ground is set up a large cross of coarse-grained sandstone, hewn out of a single block. This is understood to mark either the spot on which the tragedy was enacted, or to which Fleming carried the heroine when he saw her wounded. One of the arms of the cross has been partly broken. On each arm there is a sunken space,

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which suggests that a brass plate had been inserted; but if so, the plate has disappeared, and the cross bears no chiselled record of its purpose.

Among several curious stones in the burial ground is one with a grotesque piece of sculpture, shewing a lady, like Annie Laurie, "jimp aboot the middle," and with the lacing of her dress prominently displayed. The gossips have it that it is the effigy of a victim of tight lacing; but it does not shew intrinsic evidence of being anything but a crude attempt at an ordinary piece of sculpture. Below there is a smaller figure suggestive of a knight on mail-clad horse.

The visitors were entertained to tea; and before rising from the table Mr Barbour, architect, a vice-president of the society, tendered their very cordial thanks to Sir Edward and Lady Johnson-Ferguson for the delightful day they had spent at Springkell. Sir Edward assured the visitors it had been a great pleasure to them to welcome the Antiquarian and Natural History Society. They undoubtedly had very many beautiful things there, the result of the acquisition of a number of generations, and he thought half the pleasure of possessing them was to allow their friends to see them.

Mr W. J. Payne, solicitor, Annan, was admitted a new member.

FAIR HELEN OF KIRKCONNEL-LEE.

"I wish I were where Helen lies!
Night and day on me she cries;
O that I were where Helen lies,
On Fair Kirkconnel-lee.

"Curst be the heart that thought the thought,
And curst the hand that fired the shot,
When in my arms burd Helen dropt,
And died to succour me!

"O think ye na my heart was sair
When my love dropt doun and spak nae mair!
There did she swoon wi' meikle care,
On fair Kirkconnel-lee.

"As I went doun the water side,
None but my foe to be my guide,
None but my foe to be my guide,
On fair Kirkconnel-lee.

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"I lighted doun, my sword did draw,
I hacked him in pieces sma',
I hacked him in pieces sma',
For her sake that died for me.

"O Helen fair beyond compare!
I'll weave a garland of thy hair,
Shall bind my heart for evermair,
Until the day I dee!

"O that I were where Helen lies!
Night and day on me she cries;
Out of my bed she bids me rise,
Says, 'Haste, and come to me!'

"O Helen fair! O Helen chaste!
Were I with thee I would be blest,
Where thou lies low, and takes thy rest
On Fair Kirkconnel-lee.

"I wish my grave were growing green,
A winding sheet drawn o'er my e'en,
And I in Helen's arms lying
On Fair Kirkconnel-lee.

"I wish I were where Helen lies!
Night and day on me she cries;
And I am weary of the skies,
For her sake that died for me."

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Abstract of Accounts for Year

CHARGE.

1.	Balance from Session 1905-6	£21	6 10
2.	Arrears of Subscription recovered	3	0 0
3.	Annual Subscriptions from 178 Members	43	7 6
4.	Sum repaid by Mr George Irving for Blocks and Drawings used in printing his paper	1	17 0
5.	Arrears of Subscription	1	15 0
		£70	12 2
	To Balance due by Treasurer	£12	19 2

DUMFRIES, 11th October, 1906.—We have examined the Books and quarian Society for the year ending 30th September last, and certify that the operations.

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ending 30th September, 1906.

DISCHARGE.

1. Rents and Insurances			£8 14 6
2. Advertising Meetings			1 5 6
3. Printing and Stationery :—			
1. Annual Subscription for Annals of Scottish History	£0 7 6		
2. R. Grieve & Son	1 10 6		
3. *Dumfries Standard* for Printing Transactions	24 15 0		
4 J. Maxwell & Son	14 2 1		
			40 15 1
4. Miscellaneous :—			
1. Hire of Cabs (Bruce Sexcentenary)	£0 7 0		
2. A. Turner	1 0 9		
3. J. R. M'Lean	0 4 6		
4. Bank Commission, &c.	0 1 2		
			1 13 5
5. Posts, &c. :—			
1. Posts of Transactions	£1 15 0		
2. Secretary and Treasurer	3 9 6		
			5 4 6
6. Balance :—			
In Savings Bank	£17 0 0		
In Deposit Receipt	2 11 5		
	£19 11 5		
Balance due Clydesdale Bank	6 12 3		
			12 19 2
			£70 12 2

Accounts of the Dumfriesshire and Galloway Natural History and Anti- foregoing Abstract exhibits a true and correct account of the Treasurer's

(Signed) JOHN SYMONS, Auditor.

BERTRAM M'GOWAN, Auditor.

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EXHIBITS.

OCTOBER 6TH.

Miss M'Kie, Moat House, Dumfries—Large sunflower, 10 feet high.

The Secretary—Flowering branch of Bambusa Henonis, Colchicum autumnale fl. pl., Crocuses iridiflorus and zonatus.

NOVEMBER 3RD.

Mr George Irving, Corbridge-on-Tyne—(1) A declaration of loyalty by inhabitants of Morton; (2) scheme of valuation of division of Hightae community; (3) burgess ticket of burgh of Dumfries to George Sharp of Hoddom, dated 1767; (4) burgess ticket of city of Glasgow to George Sharp of Hoddom, about same date; (5) burgess ticket of burgh of Linlithgow to James Kirkpatrick, son of Sir Thomas, second Baronet of Closeburn, with seal attached; (6) plan of Birdoswald camp, recently visited by the society.

Mr J. Laidlaw, Lockerbie—Old sermons published in Dumfries in the eighteenth century.

Mr A. Turner, Chemist, Dumfries—A relic of David Livingstone, taken from his medicine chest.

Mr J. S. Thomson, Jeweller, Dumfries—(1) Seismographic record showing the movement of the earth at Paisley on the occasion of the recent Indian earthquake; (2) piece of Banket gold reef from West Africa.

Mr Harry Edgar, Ferguslea—(1) Tenor granting John Carruthers of Denbie power to uplift the stipend of the parish of Tundergarth; (2) burgess ticket of Dumfries, dated June, 1808, in favour of Richard Hetherington, of the Annandale and Eskdale Local Militia; (3) lieutenant's commission in East India Company's service, signed by Earl Cornwallis, of date 6th April, 1785; (4) act of freedom of burgh of Dumfries in favour of John Carruthers of Denbie, dated 4th

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June, 1808; (5) burgess ticket of New-Galloway in favour of Viscount Kenmure, dated 17th September, 1820.

Mr M. H. M'Kerrow, Solicitor, Dumfries—Skin of a baby crocodile shot by his brother on the Paraquay river, South America; also a lizard's skin, two python skins, a toucan, and the nest of the tailor bird.

Mr S. Arnott, the secretary—Two rare species of meadow saffron and an Albanian autumn snowdrop flowered in the open at Sunnymead, Maxwelltown, on 12th October.

Professor Scott-Elliot—Photographs of cup and ring markings found in Wigtownshire.

Mr Service— Several exhibits referred to in report of proceedings, and larvae of Death's Head Moth found in the end of October on farm of Townhead, Closeburn.

DECEMBER 18TH, 1905.

Series of paintings of Swiss plants and British orchids not found in this locality, shown by and the work of Mrs Thompson, Castle Street.

Rev. H. A. Whitelaw—A number of ancient Eastern lamps, one of pre-Christian date found at Joppa, while the others were mostly Roman-Christian; a number of coins of Bible times and others of the period of Charlemagne, and Robert of Anjou; and a curious dice box.

Mr R. Murray—Eastern lamp.

Mr Reid, Chemist—A number of stereoscopic views illustrative of local scenes, as well as of the siege of Paris and of Alpine regions.

Mr H. Edgar and Mr Robert Service, jun.—Old burgess tickets of Annan and Dumfries; the former documents of the old East India Company.

The President—Fossils of fish found in the chalk near Brighton; also seeds of the common yew, found in the gizzard of a hen pheasant.

Mr J. T. Johnstone, Moffat—A number of specimens of deposits found at Moffat sewage works.

Mrs Jeffrey, St. Mary's Isle Gardens—A list of wild flowers found on St. Mary's Isle as a contribution to the botany of the Isle.

Mr James Lennox—A number of lantern slides of local Abbeys, Castles, and Towers.

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DECEMBER 15TH, 1906.

Mr J. Bryce Duncan, Newlands—Chrysanthemum sport showing three colours.

Mr James Watt—Photographs, curios, and maps, to illustrate his lecture, which see.

Mr John Miller, of the Haussaland Horse—A large number of curios.

The President—A number of E. African photographs.

Mr R. Service—Male and female specimens of a new vole recently discovered in the Orkney Isles by Mr Millais; a brass medal, found in Lochrutton, and struck to commemorate coronation of William IV. and Adelaide; a very fine greenstone celt found in lower Dumfriesshire in 1905—size, $5\frac{1}{2}$ by $3\frac{1}{4}$ by $\frac{7}{8}$ by $1\frac{3}{4}$ inches.

JANUARY 26TH.

Dr Martin—Short cross sterling or penny of Henry II. found in digging a grave in Holywood Churchyard.

Mr C. Cumming, Dumfries—Two similar coins found there also, one in 1902 and the other in 1904.

Miss M. Carlyle Aitken—Brass coin found in a fig.

Mr Frank Millar, Annan—Photo of Gretna Green marriage certificate.

Mr Harry F. Edgar—Upwards of 1000 casts of cameos, medals, coins, etc.

Mr James Reid—A number of very fine stereoscopic photograph views.

FEBRUARY 2ND.

Town Council of Lochmaben—A number of interesting relics belonging to the Burgh of Lochmaben.

FEBRUARY 16TH.

The Secretary—"The Scots Gardener," 2nd edition, 1721, and "Flora, Ceres, and Pomona," by John Rea, 1665.

LOCKERBIE MEETING.

FEBRUARY 24TH.

Valuable exhibits were shown by Colonel Rogerson of Gillesbie, Colonel Irving of Bonshaw, Miss Wallace, Lochvale, Loch-

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maben; Mr John Maxwell, H.M. Travelling Commissioner, Gold Coast; and the Secretary.

MARCH 16TH.

Mr James Lennox—Limestone celt found in Cummertrees; stone whorl found at Rockhall, Torthorwald; a shilling and two sixpences of Queen Elizabeth found respectively in Cummertrees, Mouswald, and Torthorwald, dated 1575 and 1566.

Mr R. Service—Dried flower of Physianthus albens, to which was caught, by its long tongue, one of the Sphinx Moths, from the Transvaal.

Mr W. M'Cutcheon—Cocoa nut emptied by tits.

Misses Henderson, 92 Queen's Place—Pair old shoe buckles, old knife and fork; walking stick, which belonged to Provost John Crosbie, Provost of Dumfries in 1712 and following years; and the following Jacobite relics:—Teapot used at "Prince Charlie's" table when in Dumfries in 1745, and claret jug from which the Prince drank.

APRIL 20TH.

Mrs Thompson, Inveresk, Dumfries—Water-colour paintings of wild flowers.

Mr Dermid M. Ross, Duntrune—Roman and other coins.

MAY 4TH.

Mr R. Service—Stone mallet, sent by Mr Douglas, Barstibly, and found on his farm; piece of vitreous silica got at extreme point of living rock.

Mr W. Dickie—Cast adder's skin found on Skeoch Hill.

Mr J. Rutherford, Jardington—Equatorial star-finder, designed by himself.

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DONATIONS AND EXCHANGES.

Mr John M'Kie, R.N., Kirkcudbright—A set of photographs relating to Billy Marshall, the Galloway Gypsy.

Mr H. Penfold—"Guide to Brampton," written by himself.

Mr J. S. Thomson—Photograph of record of earthquakes in India in March, 1905, as recorded in Paisley Observatory.

Mr George Irving, Corbridge-on-Tyne—Plans of Birdoswald Camp and Hoddom Bridge.

Mr James Barbour—Engravings of the Insignia of the Burgh of Dumfries, drawing of the old house of the Corsan family, St. Michael Street, Dumfries; drawing of the arms of the Corsans; impression from plate of old form of burgess ticket for the burgh of Dumfries; drawing of old kiln for grain; photograph of Lochrutton Crannog, taken during the society's excavations; plan of Old Bridge, Dumfries, showing its original length; photograph of Yuma Indians; and photograph of a shield with the war cry of the burgh of Dumfries—"'A Loreburn."

Mr Frank Millar, Annan—Photograph of form used at Alison's Bank, Gretna, for irregular or "Gretna Green marriages" before John Murray.

A number of exchanges have also been received from various societies with which this society is in correspondence.

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NOTICES.

Ordinary Meetings of the Society are generally held on the 1st and 3rd Fridays of each month of the winter session, which begins in October. Papers on Natural History Antiquarian, and Scientific subjects, with occasional lectures, are given at these meetings.

Exhibits cognate to the work of the Society are also shown at these Meetings, and the co-operation of members in increasing the number of exhibits is solicited.

Field Meetings are held during the Summer Months as may be arranged.

The Society's "Transactions" are published annually, and are distributed among the members free of charge. Non-members can purchase copies from the Treasurer, Mr M. H. M'Kerrow, 30 St. David Street, Dumfries, from whom any back numbers in stock can be purchased.

The Society's Library, which includes a number of Natural History, Archæological, and Scientific Works, and a series of the "Transactions" of many of the leading learned societies, with which this society is in correspondence, is available for reference in the Ewart Public Library, Dumfries. Members of the Society have the privilege of borrowing these books on application to the Librarian at the Library.

The Society's Museum and Herbarium, which contains an almost complete collection of specimens of the local flora, are available for reference in the Library.

"The Reliquary," "The Scottish Historical Review," and "The Annals of Scottish Natural History" are circulated quar-

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terly among the members who desire them, the postage only being payable by the members of each circle. Particulars can be had from the Secretary.

A Photographic Committee has been formed for the purpose of securing a Photographic Record of Dumfries and Galloway. Photographs will be welcomed, and can be sent to the Secretary of the Committee, Mr W. A. Mackinnel, The Sheiling, Dumfries.

The Society will be glad of the adhesion of ladies and gentlemen interested in the various departments of its operations, and the Secretary will be glad to hear from any who may desire to become members, with a view to their nomination. The annual subscription is 5s; where there are more than one member from a family each one after the first pays 2s 6d.

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RULES.

Rules of the Dumfriesshire and Galloway Natural History and Antiquarian Society, as submitted for approval and adoption by the Council, and adopted at the Annual General Meeting held on October 12th, 1906.

I. The Society shall be called the "Dumfriesshire and Galloway Natural History and Antiquarian Society."

II. The aims of the Society shall be to secure a more frequent interchange of thought and opinion among those who devote themselves to the study of Natural History, Archæology, and kindred subjects; and to elicit and diffuse a taste for these studies.

III. The Society shall consist of Ordinary, Honorary, and Corresponding Members. The Ordinary Members shall be persons proposed and elected at any meeting of the society by a vote of the majority present. The Honorary and Corresponding Members shall be persons distinguished for attainments connected with the objects of the Society, and elected on the recommendation of the Council.

IV. Ordinary Members shall contribute annually five shillings in advance, or such other sum as may be agreed upon at the annual general meeting. When more than one person from the same family join the Society all after the first shall pay half fee. By making a single payment of £5 any one duly elected may become a member for life.

V. The Office-Bearers of the Society shall consist of a President, Four Vice-Presidents, Secretary, Treasurer, Librarian, Curator of Museum, and Curator of Herbarium, who, together with not more than Three Honorary Vice-Presidents, and Ten other Members, shall constitute the Council, holding office for one

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year only, but being eligible for re-election, subject to the following conditions:- One Vice-President and Two Ordinary Members of Council shall retire annually according to seniority in their respective offices, and shall not be eligible for re-election to the same office for one year. Three shall for a quorum.

VI. Meetings of the Society shall be held as may be arranged by the Council.

VII. The Annual General Meeting shall be held in October, at which the Office-Bearers and other Members of the Council, together with Two Auditors, shall be elected, Reports (General and Financial) submitted, and other business transacted. The Council shall have power to make arrangements for discharging the duties of any vacant office.

VIII. A Member may introduce a Friend to any Meeting of the Society.

IX. The Secretary shall keep the Minutes of the Society's proceedings, shall conduct the Ordinary Correspondence of the Society, and submit a Report at the Annual General Meeting, which report shall, *inter alia*, contain a statement of the attendance of Members at the Council Meetings. He shall call all Ordinary Meetings, subject to the instructions of the Council, and, on receiving the instructions of the Council or President, or a Requisition signed by Six Members, shall call a Special Meeting of the Society. On receiving the instructions of the President or a Requisition signed by Three Members of the Council, he shall forthwith call a Meeting of that body.

X. The Treasurer shall keep a List of the Members, collect the Subscriptions, take charge of the Funds, and make payments therefrom under the direction of the Council, to whom he shall present an Annual Account, to be made up to 30th September in each year, and to be audited for submission to the Annual General Meeting.

XI. Members whose subscriptions are in arrear for two years and have received notice from the Treasurer shall cease to be members.

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XII. The Society, unless otherwise arranged, shall have the power to publish in whole or in part any paper read before it in its "Transactions" or otherwise. The "Transactions" of the Society shall be published from time to time, as may be convenient, and shall be distributed to all Members contributing five shillings per annum and all Life-Members. Contributors of Papers shall, after giving timeous notice to the Secretary before publication, be entitled to receive ten copies of their papers, as and when published.

XIII. Alterations of any Rule, or the addition of New Rules, shall only be made with the consent of a majority of those present at the Annual General Meeting, and notice of proposed alterations must be given to the Secretary a month previous to the meeting.

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LIST OF MEMBERS OF THE SOCIETY

DURING 1906.

Those who joined the Society at its reorganisation on 3rd November, 1876, are indicated by an asterisk.

LIFE MEMBERS.

Duke of Buccleuch and Queensberry, K.G., K.T. .....10th Jan., 1895.
Earl of Mansfield, Scone Palace, Perth .....10th Oct., 1897.
F. R. Coles, 1 Oxford Terrace, Edinburgh.....11th Nov., 1881.
Wm. D. Robinson Douglas, F.L.S., Orchardton .....11th Nov., 1881.
Thomas Fraser, Maxwell Knowe, Dalbeattie ...2nd March, 1888.
Alex. Young Herries, Spottes, Dalbeattie.
J. J. Hope-Johnstone, Raehills, Lockerbie .....3rd May, 1884.
Wm. J. Herries Maxwell, Munches .....1st Oct., 1886.
Miss M'Kie, Moat House, Dumfries .....14th Dec., 1894.
Samuel Smith, P.C., 20 Chapel Street, Liverpool .....17th Jan., 1896.
Sir Mark J. M'Taggart Stewart, Bart., Southwick .....7th June, 1884.
Captain Wm. Stewart, Shambellie .....8th Nov., 1894.

HONORARY MEMBERS.

Baker, J. G., F.R.S., Royal Herbarium, Kew ...2nd May, 1890.
Brown, J. Harvie, F.L.S., Larbert.
Carruthers, Wm., F.R.S., British Museum.
Chinnock, E. J., LL.D., 41 Brackley Road, Chiswick, W. .....5th Nov., 1880.

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Davidson, Dr Anstruther, Los Angelis .....6th March, 1891.
M'Andrew, James, 69 Spotteswoode Street, Edinburgh.
M'Millan, Alex., Castle-Douglas.
Murray, A. D., Newcastle .....10th Nov., 1893.
Sharp, Dr David, F.R.S., Cambridge.
Shirley, G. W., Dumfries .....28th Oct., 1904.
Taylor, Robert Hibbert, M.D., Liverpool .....2nd June, 1888.
Wilson, Jos., Liverpool .....29th June, 1888.

ORDINARY MEMBERS.

Agnew, Sir A. N., Bart., of Lochnaw, Stranraer ...9th Jan., 1891.
Aitken, Miss M. Carlyle, 21 Dunbar Terrace, Dumfries .....1st June, 1883.
Andson, Rev. W., Newall Terrace, Dumfries .....3rd Oct., 1886.
Armstrong, T. G., Timber Merchant, 24 Rae Street, Dumfries ..... 9th Sept., 1905.
Armstrong, F., Burgh Surveyor, Dumfries .....6th Oct., 1905.
Arnott, S., Sunnymead, Maxwelltown .....1893.
Arnott, Mrs S., Sunnymead, Maxwelltown .....5th Jan., 1906.
Atkinson, Mrs, The Ladies' Club, Castle Street, Dumfries .....28th Oct., 1904.

Barbour, James, St. Christopher's, Dumfries.....3rd Dec., 1880.
Barbour, Robert, Belmont, Maxwelltown .....4th March, 1887.
Barbour, Robert, Solicitor, Maxwelltown.....11th May, 1889.
Barker, John, Redlands, Dumfries .....23rd Sept., 1905.
Beattie, Thos., Davington, Langholm .....30th May, 1896.
Bell, Richard, of Castle O'er, Langholm .....30th May, 1896.
Bell, Miss, 26 Castle Street, Dumfries .....25th Nov., 1894.
Bell, T. Hope, Morrington, Dunscore .....22nd Oct., 1897.
Blacklock, J. E., Solicitor, Dumfries .....8th May, 1896.
Borland, John, Auchencairn, Closeburn .....7th Sept., 1895.
Bowie, J. M., The Hain, Dalbeattie Road, Maxwelltown .....15th Dec., 1905.
Browne, Sir James Crichton, 61 Carlisle Place, Mansions, Victoria Street, London, S.W...3rd Sept., 1892.
Brown, Stephen, Boreland, Lockerbie .....10th June, 1899.

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Brown, T. M., Closeburn, Thornhill .....6th Aug., 1891.
Bryson, Alex., Irish Street, Dumfries .....6th Feb., 1891.

Cairns, Rev. J., Ivy Lodge, Albany, Dumfries...6th Feb., 1891.
Campbell, Rev. J. M., St. Michael's Manse,
Dumfries .....15th Dec., 1905.
Carmont, James, Banker, Dumfries .....6th Feb., 1891.
Clarke, Dr, Charlotte Street, Dumfries .....6th June, 1889.
Charlton, John, Huntingdon, Dumfries .....15th Dec., 1905.
Chrystie, R., Dentist, Irving Street, Dumfries.....3rd Nov., 1905.
Chrystie, Miss, Irving Street .....5th Jan., 1906.
Coats, W. A., of Dalskairth .....18th Sept., 1896.
Copland, Miss, The Old House, Newabbey .....5th July, 1890.
Cormack, J. F., Solicitor, Lockerbie .....4th June, 1893.
Corrie, John, Burnbank, Moniaive .....6th Aug., 1887.
Cowan, John, Glenview, Maxwelltown .....15th Dec., 1905.

*Davidson, James, Summerville, Maxwelltown ...3rd Nov., 1876.
Davidson, J., Hillhead, Bankend Road, Dumfries .....10th May, 1895.
Dewar, R. S., 35 George Street, Dumfries .....3rd Nov., 1905.
Dickie, Wm., Merlwood, Maxwelltown .....6th Oct., 1882.
*Dinwiddie, W. A., Bridgebank, Buccleuch
Street, Dumfries.....3rd Nov., 1876.
Dinwiddie, R., Overton, Moffat Road, Dumfries..9th Aug., 1905.
Dods, J. W., St. Mary's Place, Dumfries .....2nd March, 1883.
Drummond, Bernard, Plumber, Dumfries .....7th Dec., 1888.
Drummond, J. G., Sandon, Moffat Road,
Dumfries .....17th Nov., 1905.
Dudgeon, C. R., Cargen .....10th Feb., 1905.
Duncan, Jno. Bryce, of Newlands, Dumfries ...11th Feb., 1898.
Dunlop, Rev. S., Irongray Manse, Dumfries ...10th June, 1905.

Edgar, H., Ferguslea, Maxwelltown .....20th Jan., 1905.
Edie, Rev. W., Greyfriars' Manse, Dumfries.....15th Dec., 1905.

Farish, W. R., Amisfield House, Amisfield,
R.S.O. .....17th Nov., 1905.
Fergusson, Rev. G. F., St. Mary's Place,
Dumfries .....15th Dec., 1905.

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Gilchrist, Mrs, Linwood, Dumfries .....2nd June, 1883.
Gillespie, Wm., Solicitor, Castle-Douglas .....14th May, 1892.
Gladstone, H. Steuart, Lannhall, Thornhill .....15th July, 1905.
Glover, John, W.S., 1 Hill Street, Edinburgh ...23rd Nov., 1906.
Glover, J. J., Hazelwood, Maxwelltown .....22nd Oct., 1897.
Gordon, Robert, Brockham Park, Betchworth, Surrey .....10th May, 1895.
Grahame, Mrs, Springburn Cottage, Kilbarchan, Renfrewshire .....28th July, 1906.
Gray, W. M., 5 Victoria Terrace, Dumfries.
Grierson, John, Town Clerk, Dumfries .....6th Oct., 1882.

Halliday, T. A., Leafield Road, Dumfries .....26th Jan., 1906.
Halliday, Mrs, Leafield Road, Dumfries .....26th Jan., 1906.
Halliday, James Scott, Lockerbie .....24th Feb., 1906.
Halliday, Provost, Esthwaite, Lochmaben .....24th Feb., 1906.
Halliday, D., Provost, Lockerbie .....24th Feb., 1906.
Hannay, Miss, Langlands, Dumfries .....6th April, 1888.
Hannay, Miss J., Langlands, Dumfries .....6th April, 1888.
Hare, H. Leighton, Lochvale, Dumfries .....10th June, 1905.
Hardy, Miss, Moat House, Dumfries .....1st Oct., 1897.
Hastie, D. H., Victoria Terrace, Dumfries.....24th Feb., 1906.
Henderson, James, Solicitor, Dumfries .....9th Aug., 1905.
Henderson, John, Solicitor, Dumfries .....5th July, 1890.
Henderson, Thos., Solicitor, Lockerbie.....17th Oct., 1902.
Herries, Right. Hon. Lord, Everingham Park, Yorkshire .....10th Jan., 1895.
Hill, Edward J., Ladyfield, Dumfries .....25th Nov., 1904.
Houston, James, Marchfield, Dumfries .....9th Aug., 1905.
Hunter, Dr Joseph, Castle Street, Dumfries .....24th June, 1905.
Hunter, Rev. Joseph, 125 Mayfield Road, Edinburgh .....22nd Oct., 1897.

Irving, George, West Fell, Corbridge-on-Tyne...17th Jan., 1896.
Irving, Colonel, of Bonshaw, Annan .....18th Jan., 1901.
Irving, John, Balmacneil, Ballinluig, Perthshire 16th Oct., 1903.
Irving, John A., West Fell, Corbridge-on-Tyne ...7th Dec., 1906.

Jackson, Colonel, 6 Fruid's Park, Annan .....9th Aug., 1905.

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Johnson-Ferguson, Sir J. E., Bart., of Springkell, Ecclefechan .....30th May, 1896.
Johnson-Ferguson, A., Wiston Lodge, Lamington .....9th Sept., 1905.
Johnstone, John T., Victoria House, Moffat .....4th April, 1890.
Johnstone, Mrs, Victoria Terrace, Dumfries .....17th Feb., 1896.
Johnstone, W. S., Victoria Terrace, Dumfries ...11th Feb., 1898.

Kidd, Rev. Thos., U.F. Manse, Moniaive .....29th June, 1895.
Kirkpatrick, Rev. R. S., The Manse, Govan ...17th Feb., 1896.

Laidlaw, John, Plasterer, Lockerbie .....18th Oct., 1901.
Law, Rev. James, South U.F. Manse, Dumfries...2nd June, 1905.
*Lennox, Jas., F.S.A. Scot., Edenbank, Maxwelltown .....3rd Nov., 1876.
Loreburn, The Right Hon. Lord, 6 Eton Square, London, S.W. .....9th Jan., 1891.

Malcolm, A., Redbank, Dumfries .....2nd Oct., 1894.
Malcolm, Colonel, Burnfoot, Langholm .....13th Dec., 1895.
Mann, R. G., Cairnsmore, Marchmount Park, Dumfries .....24th Oct., 1900.
Manson, D., Acrehead, Dumfries .....16th June, 1906.
Manson, Mrs, Acrehead, Dumfries .....16th June, 1906.
Matthews, Wm., Dunelm, Dalbeattie Road, Dumfries .....28th July, 1906.
Matthews, Mrs, Dunelm, Dalbeattie Road, Dumfries .....28th July, 1906.
Martin, Dr J. W., Newbridge, Dumfries .....16th Oct., 1896.
Maxwell, Sir H., Bart., of Monreith, Wigtownshire .....7th Oct., 1892.
Maxwell, W. J., Terregles Banks, Dumfries .....6th Oct., 1879.
Maxwell, Wellwood, of Kirkennan, Dalbeattie...5th Nov., 1886.
Maxwell, John, Tarquah, Maxwelltown .....20th Jan., 1905.
Milligan, J. P., Aldouran, Castle-Douglas Road, Maxwelltown .....17th Oct., 1905.
Milligan, Mrs, Aldouran, Castle-Douglas Road, Maxwelltown .....17th Oct., 1905.
Millar, F., Bank of Scotland, Annan .....3rd Sept., 1886.
Millar, John, Elmwood, Moffat .....24th Feb., 1906.

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Millar, William, Elmwood, Moffat .....16th June, 1906.
Moffat, James, Bank of Scotland, Annan.
Mond, Miss, Aberdour House, Dumfries .....9th Sept., 1905.
Murdoch, W. J., Cluden Bank, Holywood.....21st Dec., 1906.
Murphy, Rev. J., Park Road, Maxwelltown .....5th Jan., 1906.
Murphie, Miss Annie, Cresswell House, Dumfries .....23rd Nov., 1906.
Murray, R., George Street, Dumfries .....5th July, 1884.
Murray, Mrs, George Street, Dumfries .....6th April, 1883.
Murray, Wm., Murraythwaite, Ecclefechan .....8th Feb., 1895.
Murray, Mrs, Murraythwaite, Ecclefechan .....29th July, 1905.

M'Call, James, of Caitloch, Moniaive .....29th June, 1895.
M'Cargo, James, Kirkpatrick-Durham .....24th April, 1896.
M'Connel, Miss, Milnhead, Kirkmahoe .....19th Feb., 1904.
M'Connel, Miss L. H., Milnhead, Kirkmahoe ...25th Nov., 1904.
M'Cormick, Andrew, Solicitor, Newton-Stewart...3rd Nov., 1905.
M'Craken, Miss, Fernbank, Lovers' Walk .....9th Nov., 1906.
M'Cutcheon, Wm., B.Sc., Inverie, Park Road, Maxwelltown .....18th Oct., 1901.
Macdonald, J. C. R., W.S., Dumfries .....6th Nov., 1885.
M'Gowan, B., Solicitor, Dumfries .....26th Oct., 1900.
M'Jerrow, David, Town Clerk, Lockerbie .....22d Feb., 1906.
Mackenzie, Colonel, of Auchenskeoch .....25th Aug., 1895.
M'Kerrow, M. H., Solicitor, Dumfries .....19th Jan., 1900.
M'Kerrow, Matt. S., Boreland of Southwick .....9th Jan., 1890.
M'Kie, Thos., Moat House, Dumfries .....2nd Aug., 1890.
M'Kie, John, R.N., Anchorlea, Kirkcudbright ...4th April, 1881.
MacKinnel, W. A., The Sheiling, Castle-Douglas Road, Dumfries .....22nd Feb., 1906.
MacKinnel, Mrs, The Sheiling, Castle-Douglas Road, Dumfries .....22nd Feb., 1906.
M'Kinnon, Rev. Albert, Lochmaben .....9th Nov., 1906.
M'Kinnon, Mrs, Lochmaben .....9th Nov., 1906.
M'Lachlan, Mrs, Dryfemount, Lockerbie .....26th March, 1906.
M'Lachlan, Jas., M.D., Lockerbie .....25th Oct., 1895.

Neilson, George, LL.D., Wellfield, Partickhill Road, Glasgow .....13th Dec., 1895.
Neilson, J., of Mollance, Castle-Douglas .....13th March, 1896.

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*Nicholson, J. H., Airlie, Maxwelltown .....9th Aug., 1904.

Ovens, Walter, of Torr, Auchencairn .....13th March, 1896.

Pairman, Dr, Moffat .....24th Feb., 1906.
Palmer, Charles, Woodbank Hotel, Dumfries ...29th July, 1905.
Payne, J. W., 8 Bank Street, Annan .....8th Sept., 1906.
Penman, A. C., Airlie, Moffat Road .....18th June, 1901.
Penman, Mrs, Airlie, Moffat Road .....17th Oct., 1905.
Phyn, C. S., Procurator-Fiscal, Dumfries .....6th Nov., 1885.
Pickering, R. Y., of Conheath, Dumfries .....26th Oct., 1900.
Primrose, John, Solicitor, Dumfries.....5th Dec., 1889.
Proudfoot, John, Ivy House, Moffat .....9th Jan., 1890.

Rae, E. B., Town Clerk, Lochmaben .....22nd Feb., 1906.
Rae, Rev. R. Neill, The Manse, Lochmaben ...21st Dec., 1906.
Reid, F., St. Catherines, Dumfries .....6th Jan., 1882.
Reid, James, Chemist, Dumfries.
Robertson, Dr J. M., Penpont .....3rd Feb., 1886.
Robson, John, Westbourne, Maxwelltown .....25th May, 1895.
Rogers, Miss, The Oaks, Rotchell Park .....21st Dec., 1906.
Ross, Dr J. Maxwell, Duntrune, Castle-
Douglas Road .....11th July, 1891.
*Rutherford, J., Jardington, Dumfries .....Nov., 1876.

Saunders, Wm., Rosebank, Lockerbie.
Scott-Elliot, Professor G. F., F.L.S.,
F.R.G.S., of Newton, Dumfries .....4th March, 1887.
Scott, Alexander, Solicitor, Annan .....7th Nov., 1890.
Scott, Rev. J. Hay, F.S.A. Scot., Sanquhar .....6th Aug., 1887.
Scott, R. A., Fairfield, Dumfries .....1st Oct., 1890.
Scott, W. S., Redcastle, Dalbeattie .....14th Jan., 1898.
Scott-Elliot, Mrs, Newton, Dumfries .....26th Oct., 1906.
Scott, Hart W., The Hovel, Maxwelltown .....9th Nov., 1906.
Semple, Dr, Airlie, Moffat Road, Dumfries .....12th June, 1901.
*Service, Robert, Seedsman, Maxwelltown .....1876.
Service, Robert, Jun., Janefield, Maxwell-
town .....24th March, 1905.
Smith, R. G. Eddington-, Buccleuch Street,
Dumfries .....9th Nov., 1906.

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Smith, Miss, Llangarth, Maxwelltown .....6th Oct., 1905.
Stark, J. G. Hamilton, Troqueer Holm .....2nd March, 1877.
Stephen, Rev. W. L., St. Mary's Manse, Moffat, 28th June, 1904.
Stewart, William, Shambellie, Newabbey .....21st Dec., 1906.
*Stobie, P., Cabinetmaker, Dumfries .....3rd Nov., 1876.
Street, Rev. W. J., U.F. Manse, Maxwelltown ...17th Nov., 1905.
Symons, John, Royal Bank, Dumfries .....2nd Feb., 1883.
Symons, John, Solicitor, Dumfries .....6th Nov., 1885.

*Thomson, J. S., Jeweller, Dumfries .....3rd Nov., 1876.
Thomson, Wm., Solicitor, Dumfries .....1st Oct., 1898.
Thomson, Miss, c/o Miss Dunbar, Langlands, Dumfries.
Thompson, Mrs H. A., 26 Castle Street, Dumfries .....25th Nov., 1904.
Tocher, John, Chemist, Dumfries .....19th Jan., 1900.
Turner, Alex., Chemist, Dumfries .....17th Oct., 1905.

Veitch, W. H., Factor, Hoddom .....26th Oct., 1900.

Waddell, J. B., Victoria Terrace, Dumfries .....11th June, 1901.
Waddell, Mrs, Victoria Terrace, Dumfries .....11th June, 1901.
Wallace, M. G., Terreglestown, Dumfries .....11th March, 1898.
Wallace, Miss, Lochvale House, Lochmaben .....7th Oct., 1892.
Watt, James, Crawford Villa, Johnstone Park, Dumfries .....7th March, 1879.
Watt, Miss, Crawford Villa, Johnstone Park, Dumfries .....6th Oct., 1905.
Watson, Thos., Castlebank, Dumfries .....9th Jan., 1880.
Weatherstone, Andrew, Bank of Scotland House, Dumfries.....1st Dec., 1905.
White, John, Oaklands, Noblehill .....28th July, 1906.
White, Mrs Oaklands, Noblehill .....28th July, 1906.
Whitelaw, J. W., Solicitor, Dumfries .....6th Nov., 1885.
Whitelaw, Rev. H. A., U.F. Manse, Albany, Dumfries .....20th May, 1904.
Wightman, Abel, Lockerbie .....24th Feb., 1906.
Will, Geo., C.R.I., Farm Manager .....28th July, 1906.
Wilson, John, Solicitor, Dumfries .....29th July, 1905.

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Wilson, Mrs, Castledykes Cottage, Dumfries.....24th May, 1905.
Wilson, Miss, Castledykes Cottage, Dumfries ...24th Feb., 1906.
Wilson, J. R., Solicitor, Sanquhar .....2nd Oct., 1885.
Witham, Colonel J. K. Maxwell, C.M.G., of
Kirkconnel, Dumfries .....7th March, 1890.
Witham, Miss Maud, Kirkconnel, Dumfries .....6th Feb., 1890.

Yerburgh, R. A., of Barwhillanty, Parton,
R.S.O., per F. A. Maryiate, 25
Kensington Gore, London, S.W. .....17th Feb., 1896.

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